

**TYRONE TOWNSHIP
REGULAR BOARD MEETING AGENDA
JANUARY 18, 2022 - 7:00 P.M.
(810) 629-8631**

This meeting will be held both in person at the township and electronically via Zoom. Details to join the meeting via Zoom follow this agenda.

CALL TO ORDER – PLEDGE OF ALLEGIANCE – 7:00 P.M.

ROLL CALL

APPROVAL OF AGENDA – OR CHANGES

APPROVAL OF CONSENT AGENDA

Regular Board Meeting Minutes – December 21, 2021
Clerk’s Warrants and Bills – January 12, 2022

COMMUNICATIONS

1. Livingston County Sheriff’s Report – December 31, 2021
2. Planning Commission Approved Regular Meeting & Public Hearing Minutes- August 10, 2021
3. Planning Commission Approved Regular Meeting Minutes- August 18, 2021
4. Planning Commission Meeting & Public Hearing Synopsis- January 11, 2022

PUBLIC REMARKS

UNFINISHED BUSINESS

1. Lake Urban Crossings PUD Preliminary Site Plan.

NEW BUSINESS

1. Speaker Larry Gawthrop, CFAO, Mott Community College.
2. Niemi shared private driveway request.
3. Historic Town House Resolution.
4. Grant Management Policies and Procedures Resolution.
5. Budget amendment.
6. Meeting Dates 2022-2023 Resolution.

MISCELLANEOUS BUSINESS

PUBLIC REMARKS

ADJOURNMENT

* * * * *

Supervisor Mike Cunningham Clerk Marcella Husted

Please note: Anyone wishing to address the Township Board may do so during Public Remarks. The Tyrone Township Board of Trustees has established a policy limiting the time a person may address the Township Board at a regular or at a special meeting during the Public Remarks section of the agenda to three minutes. The Board reserves the right to place an issue under the New Business section of the agenda if additional discussion is warranted or to respond later either verbally or in writing through an appropriately appointed Township Official. Individuals with disabilities requiring auxiliary aids or services should contact the Tyrone Township Clerk at (810) 629-8631 at least seven days prior to the meeting.

Join Zoom Meeting

<https://us02web.zoom.us/j/86974195877?pwd=ZWR2RnQ1TytxR2lNaDVpT0h6WTZDdz09>

Meeting ID: 869 7419 5877

Passcode: 007986

One tap mobile

+13126266799,,86974195877#,,,,*007986# US (Chicago)

+16465588656,,86974195877#,,,,*007986# US (New York)

Dial by your location

+1 312 626 6799 US (Chicago)

+1 646 558 8656 US (New York)

+1 301 715 8592 US (Washington DC)

+1 346 248 7799 US (Houston)

+1 669 900 9128 US (San Jose)

+1 253 215 8782 US (Tacoma)

Meeting ID: 869 7419 5877

Passcode: 007986

Find your local number: <https://us02web.zoom.us/u/kd0jH5IVmV>

CONSENT AGENDA

Regular Board Meeting Minutes – December 21, 2021

Clerk's Warrants and Bills – January 12, 2022

**TYRONE TOWNSHIP
REGULAR BOARD MEETING
APPROVED MINUTES – DECEMBER 21, 2021 – PAGE 1**

CALL TO ORDER

Supervisor Cunningham called the meeting of the Tyrone Township Board to order with the Pledge of Allegiance on December 21, 2021 at 7:20 p.m. at the Tyrone Township Hall. The meeting started later because the township attorney spoke to the Board about preliminary site plans beforehand.

ROLL CALL

Present: Supervisor Mike Cunningham, Clerk Marcella Husted, Treasurer Jennifer Eden, Trustees Herman Ferguson, Kurt Schulze, Zach Tucker and David Walker.

APPROVAL OF AGENDA – OR CHANGES

Trustee Walker moved to approve the agenda as amended. (Treasurer Eden seconded.) The motion carried; all ayes. The modification is as follows:

Added New Business #2 Shoemaker Snow Removal Contract for the Township Hall.

APPROVAL OF CONSENT AGENDA

**Regular Board Meeting Minutes – December 7, 2021
Treasurer’s Report – November 30, 2021
Clerk’s Warrants and Bills – December 15, 2021**

Trustee Walker moved to approve the consent agenda as presented. (Trustee Ferguson seconded.) The motion carried; all ayes.

COMMUNICATIONS

- 1. Planning Commission Meeting Synopsis – December 14, 2021**
- 2. Fire Service Run – December 15, 2021**

Trustee Walker moved to receive and place on file Communications #1-2 as presented. (Trustee Tucker seconded.) The motion carried; all ayes.

PUBLIC REMARKS

Joe Cooper (Runyan Lake Rd.) voiced concerns the proposed PUD could create with traffic and environmentally.

Scott Dietrich (White Lake Rd.) agreed with the traffic and environmental concerns.

UNFINISHED BUSINESS

None

NEW BUSINESS

- 1. Lake Urban Crossings PUD Preliminary Site Plan.**

Trustee Tucker moved to send the PUD preliminary site plan back to the Planning Commission and address items 1-11 (*“items that require Planning Commission determinations,”* Carlisle

**TYRONE TOWNSHIP
REGULAR BOARD MEETING
APPROVED MINUTES – DECEMBER 21, 2021 – PAGE 2**

Wortman review, November 4, 2021) and 1-10 (“*potential conditions of approval for the Planning Commission to consider,*” Carlisle Wortman review, November 4, 2021.) for clarification and a new recommendation. (Trustee Walker seconded.) The motion carried; all ayes.

2. Shoemaker Snow Removal Contract for the Township Hall.

Trustee Ferguson moved to accept Shoemaker Services’ two-year contract for snow removal at the Township Hall. (Trustee Schulze seconded.) The motion carried; all ayes.

MISCELLANEOUS BUSINESS

None.

PUBLIC REMARKS

Clerk Husted answered a question from a resident regarding the township’s monthly bills.

Scott Dietrich stated he did not agree with the Lake Urban traffic study.

ADJOURNMENT

Trustee Walker moved to adjourn. (Trustee Ferguson seconded.) The motion carried; all ayes. The meeting adjourned at 8:29 p.m.

Check Date	Bank	Check	Vendor	Vendor Name	Amount
Bank 001 STATE BANK COMMON ACCOUNT					
12/01/2021	001	22939	CHASE CARD	CHASE CARD SERVICE	325.16
12/01/2021	001	22940	41	CONSUMERS ENERGY	457.39
12/01/2021	001	22941	127	HARRIS & LITERSKI ATTORNEYS AT	3,073.50
12/01/2021	001	22942	938	LIVINGSTON COUNTY SHERIFF'S DEPT	1,458.60
12/01/2021	001	22943	MACKLIN	MACKLIN MECHANICAL COMPANY	1,190.00
12/01/2021	001	22944	293	RICOH USA, INC.	248.42 V
12/01/2021	001	22945	173	SHRED-IT USA	69.83
12/01/2021	001	22946	VOYA	VOYA INSTITUTIONAL TRUST COMPANY	160.00
12/01/2021	001	22947	WATER TECH	WATER TECH	97.00
12/07/2021	001	22948	AT&T MOBIL	AT&T MOBILITY	79.15
12/07/2021	001	22949	41	CONSUMERS ENERGY	237.34
12/07/2021	001	22950	DOUGIES	DOUGIE'S DISPOSAL & RECYCLING	7,839.00
12/07/2021	001	22951	871	LIVINGSTON COUNTY TREASURER	237.00
12/07/2021	001	22952	439	REPUBLIC SERVICES#237	442.96
12/07/2021	001	22953	SUNSET	SUNSET MAINTENANCE, LLC	560.00
12/07/2021	001	22954	VIEW NEWS	VIEW NEWSPAPER GROUP	641.04
12/20/2021	001	22955	297	BLUE CROSS BLUE SHIELD OF MICHIGAN	7,867.35
12/20/2021	001	22956	CWA	CARLISLE/WORTMAN ASSOCIATES, INC	1,210.00
12/20/2021	001	22957	108	CHARTER COMMUNICATIONS	126.85
12/20/2021	001	22958	FIRE PROT	FIRE PROTECTION PLUS, INC.	116.75
12/20/2021	001	22959	127	HARRIS & LITERSKI ATTORNEYS AT	1,246.50
12/20/2021	001	22960	IVS COMM	IVS COMM, INC.	125.00
12/20/2021	001	22961	472	KCI	1,661.21
12/20/2021	001	22962	199	MURPH'S TURF	4,650.00
12/20/2021	001	22963	RICOH LEAS	RICOH USA INC	196.28
12/20/2021	001	22964	259	SHOEMAKER SERVICES INC	1,948.00
12/20/2021	001	22965	25	STAPLES ADVANTAGE	579.42
12/20/2021	001	22966	VOYA	VOYA INSTITUTIONAL TRUST COMPANY	1,305.00
01/05/2022	001	22967	120	ACCIDENT FUND COMPANY OF	391.75
01/05/2022	001	22968	108	CHARTER COMMUNICATIONS	124.98
01/05/2022	001	22969	CHASE CARD	CHASE CARD SERVICE	718.96
01/05/2022	001	22970	41	CONSUMERS ENERGY	495.99
01/05/2022	001	22971	871	LIVINGSTON COUNTY TREASURER	321.00
01/05/2022	001	22972	439	REPUBLIC SERVICES#237	444.08
01/05/2022	001	22973	259	SHOEMAKER SERVICES INC	1,831.00
01/05/2022	001	22974	173	SHRED-IT USA	70.84
01/05/2022	001	22975	25	STAPLES ADVANTAGE	690.06
01/05/2022	001	22976	VOYA	VOYA INSTITUTIONAL TRUST COMPANY	160.00
01/05/2022	001	22977	303	WASTE MANAGEMENT	175.63
01/11/2022	001	22978	AT&T MOBIL	AT&T MOBILITY	79.15
01/11/2022	001	22979	41	CONSUMERS ENERGY	230.57
01/11/2022	001	22980	GRIFFIN	GRIFFIN PEST SOLUTIONS, INC	51.00
01/11/2022	001	22981	127	HARRIS & LITERSKI ATTORNEYS AT	3,745.50
01/11/2022	001	22982	706	HARTLAND CONSOLIDATED SCHOOLS	9,795.00
01/11/2022	001	22983	IVS COMM	IVS COMM, INC.	125.00
01/11/2022	001	22984	SUNSET	SUNSET MAINTENANCE, LLC	560.00
01/11/2022	001	22985	VIEW NEWS	VIEW NEWSPAPER GROUP	346.50
01/11/2022	001	22986	VOYA	VOYA INSTITUTIONAL TRUST COMPANY	160.00

001 TOTALS:
 Total of 48 Checks: 58,665.76
 Less 1 Void Checks: 248.42
 Total of 47 Disbursements: 58,417.34

Bank 022 STATE BANK - PUBLIC SAFETY checking

12/01/2021	022	1275	CHASE CARD	CHASE CARD SERVICE	26.89
12/01/2021	022	1276	176	HARTLAND AREA FIRE DEPARTMENT	8,682.00
12/20/2021	022	1277	16	CITY OF FENTON FIRE DEPARTMENT	20,258.00
12/20/2021	022	1278	UNIVERSAL	UNIVERSAL CREDIT SERVICES	405.16
01/05/2022	022	1279	CHASE CARD	CHASE CARD SERVICE	26.89
01/05/2022	022	1280	176	HARTLAND AREA FIRE DEPARTMENT	15,917.00 V
01/05/2022	022	1281	176	HARTLAND AREA FIRE DEPARTMENT	15,917.00
01/11/2022	022	1282	19	CHARTER TOWNSHIP OF FENTON	28,940.00

022 TOTALS:
 Total of 8 Checks: 90,172.94
 Less 1 Void Checks: 15,917.00
 Total of 7 Disbursements: 74,255.94

Bank 102 SEWER O&M CHECKING 590

12/07/2021	102	452	24	LIVINGSTON COUNTY DRAIN COMM.	67,235.17
01/11/2022	102	453	24	LIVINGSTON COUNTY DRAIN COMM.	73,813.17

Check Date	Bank	Check	Vendor	Vendor Name	Amount
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102 TOTALS:

Total of 2 Checks:	141,048.34
Less 0 Void Checks:	0.00
Total of 2 Disbursements:	<u>141,048.34</u>

Bank 108 TAX FUND FLAGSTAR

12/01/2021	108	3094	806	FENTON SCHOOLS	2,646.28
12/01/2021	108	3095	GISD	GISD	1,255.03
12/01/2021	108	3096	706	HARTLAND CONSOLIDATED SCHOOLS	2,177.27
12/01/2021	108	3097	LESA	LESA	2,394.84
12/01/2021	108	3098	REFUND TAX	LIBERTY TITLE AGENCY	30.09
12/01/2021	108	3099	945	LINDEN COMMUNITY SCHOOLS	3,067.42
12/01/2021	108	3100	871	LIVINGSTON COUNTY TREASURER	18,096.93
12/20/2021	108	3101	REFUND TAX	ADVANTAGE TITLE LLC	34.19
12/20/2021	108	3102	REFUND TAX	BATTAGLIA THOMAS & NOREEN	7,158.34
12/20/2021	108	3103	REFUND TAX	CORELOGIC	189.04
12/20/2021	108	3104	REFUND TAX	CORELOGIC	14,772.98
12/20/2021	108	3105	REFUND TAX	CORELOGIC	2,892.59
12/20/2021	108	3106	CROMAINE	CROMAINE LIBRARY	10,524.70
12/20/2021	108	3107	806	FENTON SCHOOLS	191,023.29
12/20/2021	108	3108	GISD	GISD	124,248.67
12/20/2021	108	3109	706	HARTLAND CONSOLIDATED SCHOOLS	71,899.64
12/20/2021	108	3110	REFUND TAX	LASHBROOK THOMAS III	4,323.57
12/20/2021	108	3111	LESA	LESA	1,349.34
12/20/2021	108	3112	945	LINDEN COMMUNITY SCHOOLS	37,150.12
12/20/2021	108	3113	871	LIVINGSTON COUNTY TREASURER	49,979.82
12/20/2021	108	3114	REFUND TAX	MIZZI PAUL & SHIRLEY TRUST	1,720.14
12/20/2021	108	3115	MOTT	MOTT COMMUNITY COLLEGE	118,911.60
12/20/2021	108	3116	REFUND TAX	PEGOUSKIE JOHN & CAROL LF EST	835.68
12/20/2021	108	3117	REFUND TAX	RAGO DAVID & MEISNER THERESA	1,889.97
12/20/2021	108	3118	REFUND TAX	STRUBLE MATHEW	52.16
12/20/2021	108	3119	REFUND TAX	SWEET DAVID & WRATHELL HOLLY	452.86
12/20/2021	108	3120	REFUND TAX	TRANS NATION TITLE AGENCY	5,958.62
12/20/2021	108	3121	REFUND TAX	VANGUARD TITLE INSURANCE AGENCY LLC	39.04
12/20/2021	108	3122	REFUND TAX	WHITEMAN JOHN GARY	107.13
01/05/2022	108	3123	CROMAINE	CROMAINE LIBRARY	23,631.13
01/05/2022	108	3124	806	FENTON SCHOOLS	263,560.77
01/05/2022	108	3125	GISD	GISD	181,281.50
01/05/2022	108	3126	REFUND TAX	GLEBE PHILIP G TRUST	342.29
01/05/2022	108	3127	706	HARTLAND CONSOLIDATED SCHOOLS	161,427.26
01/05/2022	108	3128	LESA	LESA	400.44
01/05/2022	108	3129	945	LINDEN COMMUNITY SCHOOLS	63,144.13
01/05/2022	108	3130	871	LIVINGSTON COUNTY TREASURER	51,364.63
01/05/2022	108	3131	REFUND TAX	MANN BRIAN	194.25
01/05/2022	108	3132	MOTT	MOTT COMMUNITY COLLEGE	166,427.83
01/05/2022	108	3133	REFUND TAX	TRIBE TITLE CO LLC	6.22

108 TOTALS:

Total of 40 Checks:	1,586,961.80
Less 0 Void Checks:	0.00
Total of 40 Disbursements:	<u>1,586,961.80</u>

Bank 112 FLAGSTAR CHECKING - SA ROAD IMPROVEMENTS

12/01/2021	112	1066	USBANK	US BANK	12,268.75
12/07/2021	112	1067	HUNTINGTON	HUNTINGTON NATIONAL BANK	7,282.50
12/07/2021	112	1068	100	THE STATE BANK	12,589.50

112 TOTALS:

Total of 3 Checks:	32,140.75
Less 0 Void Checks:	0.00
Total of 3 Disbursements:	<u>32,140.75</u>

Bank 203 TRUST & AGENCY 701 CKG

12/20/2021	203	1934	CWA	CARLISLE/WORTMAN ASSOCIATES, INC	1,050.00
12/20/2021	203	1935	871	LIVINGSTON COUNTY TREASURER	2,230.00
12/20/2021	203	1936	96	TYRONE TOWNSHIP	446.07

203 TOTALS:

Total of 3 Checks:	3,726.07
Less 0 Void Checks:	0.00
Total of 3 Disbursements:	<u>3,726.07</u>

Check Date	Bank	Check	Vendor	Vendor Name	Amount
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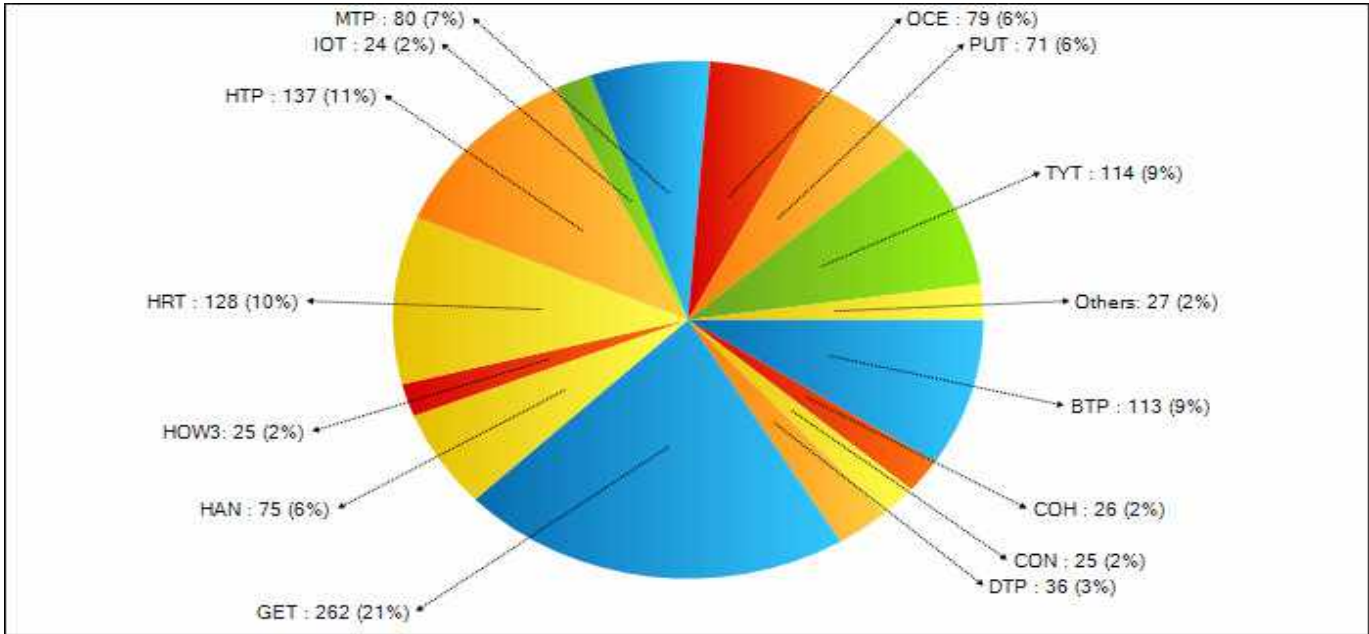
REPORT TOTALS:

Total of 104 Checks:	1,912,715.66
Less 2 Void Checks:	16,165.42
Total of 102 Disbursements:	<u>1,896,550.24</u>

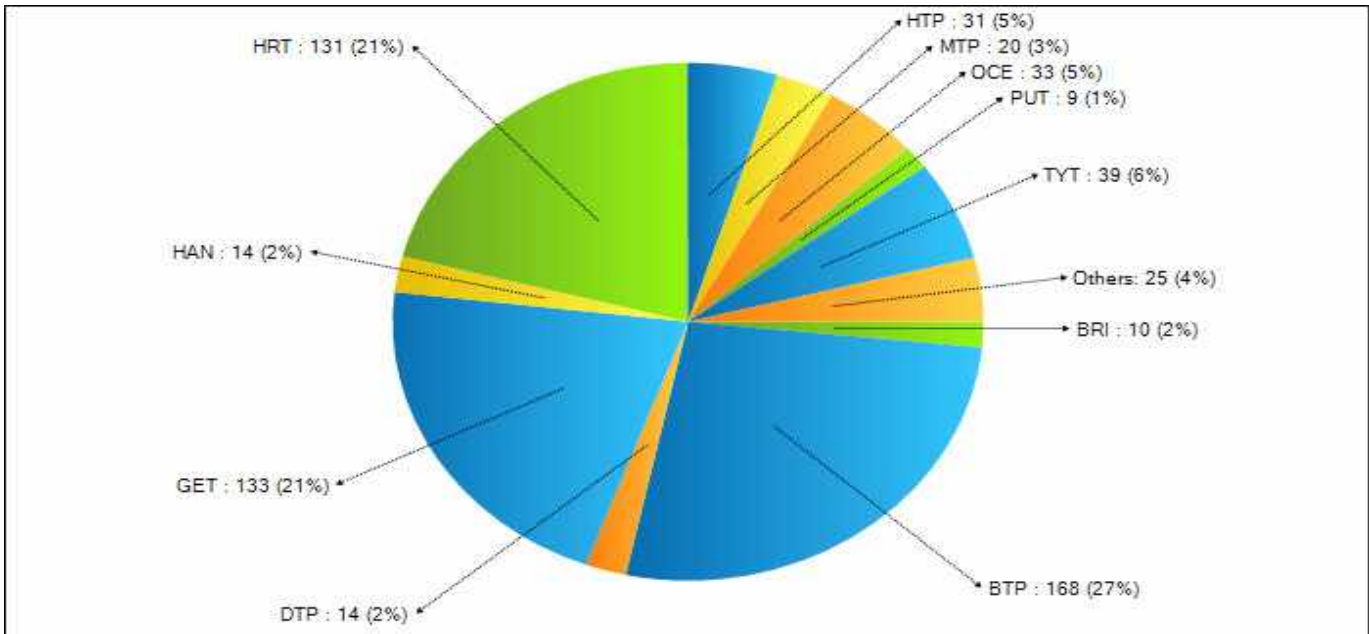
COMMUNICATION #1

Livingston County Sheriff's Report – December 31, 2021

**LIVINGSTON COUNTY SHERIFF'S OFFICE
DECEMBER 2021 CALLS FOR SERVICE**



**MICHIGAN STATE POLICE
DECEMBER 2021 CALLS FOR SERVICE**



**LIVINGSTON COUNTY SHERIFF'S OFFICE
TYRONE TOWNSHIP DECEMBER 2021**

Nature	# Events
911 HANG UP	1
ALARM	4
ANIMAL COMPLAINT	5
ASSAULT REPORT ONLY	1
ASSIST EMS	14
ASSIST FIRE DEPARTMENT	2
ASSIST OTHER AGENCY	2
BURGLARY REPORT ONLY	1
CARDIAC/RESPIRATORY ARREST	1
CITIZEN ASSIST	12
CIVIL COMPLAINT	1
CUSTODY DISPUTE	1
DOMESTIC PHYSICAL IN PROGRESS	1
DOMESTIC VERBAL	5
FOLLOW UP	1
HAZARD	5
HIT AND RUN ACCIDENT	1
INFO- GENERAL	1
INTIMIDATION THREATS HARASSMEN	2
LOST/FOUND ANIMAL INFORMATION	1
LOUD PARTY	1
MDOP	1
MENTAL/CMH/PSYCH	1
MISSING PERSON/RUN-A-WAY	1
MOTORIST ASSIST	4
NOISE COMPLAINTS	1
OVERDOSE/INGESTION	2
PARKING COMPLAINTS	1
PATROL INFORMATION	3
PDA	10
PERSON LOCKED IN A VEHICLE	1
PHYSICAL DOMES REPORT ONLY	1
PUBLIC SERVICE	1
ROAD RUNOFF	3
SUSPICIOUS PERSON	2
SUSPICIOUS SITUATION	4
SUSPICIOUS VEHICLE	1
TRESSPASSING, LOITERING	2
UNATTENDED DEATH PRI 3/INVEST	2
UNATTENDED DEATH/INVESTIGATION	1
UNKNOWN ACCIDENT	1
WELFARE CHECK	8
TOTAL:	114

<u>TOWNSHIP</u>	NUMBER OF CALLS <u>3:00PM - 11:00PM</u>	RESPONSE TIME CONTRACT TIME <u>3:00PM - 11:00PM</u>	NUMBER OF CALLS <u>11:00PM - 3:00PM</u>	RESPONSE TIME NON CONTRACT TIME <u>11:00PM - 3:00PM</u>	<u>TOTAL</u>
BRIGHTON	42	16:18	71	25:50	113
COHOCTAH	15	21:41	12	30:08	27
CONWAY	11	41:41	14	49:20	25
DEERFIELD	11	22:34	25	28:29	36
GENOA	101	21:55	161	19:35	262
HANDY	28	22:28	47	31:51	75
HARTLAND	43	24:30	85	26:23	128
HOWELL	58	18:27	79	17:43	137
IOSCO	12	22:27	12	31:45	24
MARION	31	27:01	49	17:39	80
OCEOLA	30	18:13	49	18:51	79
PUTNAM	33	20:50	38	27:18	71
TYRONE	65	17:48	49	31:32	114

TYRONE TOWNSHIP

<u>MONTH</u>	<u>CALLS FOR SERVICE</u>	<u>TICKETS WRITTEN</u>	<u>ARRESTS</u>
JANUARY	116	8	2
FEBRUARY	101	10	4
MARCH	102	8	2
APRIL	138	21	0
MAY	112	27	7
JUNE	163	24	3
JULY	163	19	3
AUGUST	124	12	3
SEPTEMBER	130	20	0
OCTOBER	143	23	1
NOVEMBER	142	23	6
DECEMBER	114	4	1
YTD TOTALS:	1548	199	32

BRIGHTON**COHOCTAH****CONWAY****DEERFIELD****CALLS FOR SERVICE****CALLS FOR SERVICE****CALLS FOR SERVICE****CALLS FOR SERVICE**

JANUARY	112	JANUARY	29	JANUARY	26	JANUARY	41
FEBRUARY	110	FEBRUARY	26	FEBRUARY	24	FEBRUARY	34
MARCH	109	MARCH	36	MARCH	29	MARCH	26
APRIL	114	APRIL	37	APRIL	15	APRIL	23
MAY	113	MAY	22	MAY	12	MAY	35
JUNE	165	JUNE	25	JUNE	20	JUNE	35
JULY	156	JULY	33	JULY	36	JULY	37
AUGUST	126	AUGUST	33	AUGUST	27	AUGUST	25
SEPTEMBER	114	SEPTEMBER	36	SEPTEMBER	35	SEPTEMBER	35
OCTOBER	137	OCTOBER	40	OCTOBER	33	OCTOBER	32
NOVEMBER	108	NOVEMBER	27	NOVEMBER	36	NOVEMBER	37
DECEMBER	113	DECEMBER	27	DECEMBER	25	DECEMBER	36
YTD TOTAL:	1477	371		318		396	

TICKETS WRITTEN**TICKETS WRITTEN****TICKETS WRITTEN****TICKETS WRITTEN**

JANUARY	22	JANUARY	0	JANUARY	3	JANUARY	2
FEBRUARY	20	FEBRUARY	6	FEBRUARY	5	FEBRUARY	5
MARCH	21	MARCH	5	MARCH	4	MARCH	9
APRIL	25	APRIL	2	APRIL	3	APRIL	9
MAY	24	MAY	1	MAY	2	MAY	6
JUNE	19	JUNE	5	JUNE	1	JUNE	1
JULY	38	JULY	3	JULY	1	JULY	7
AUGUST	28	AUGUST	1	AUGUST	15	AUGUST	3
SEPTEMBER	19	SEPTEMBER	6	SEPTEMBER	7	SEPTEMBER	6
OCTOBER	15	OCTOBER	2	OCTOBER	6	OCTOBER	3
NOVEMBER	29	NOVEMBER	4	NOVEMBER	4	NOVEMBER	3
DECEMBER	55	DECEMBER	1	DECEMBER	0	DECEMBER	6
YTD TOTAL:	315	36		51		60	

ARRESTS**ARRESTS****ARRESTS****ARRESTS**

JANUARY	0	JANUARY	1	JANUARY	1	JANUARY	1
FEBRUARY	1	FEBRUARY	0	FEBRUARY	2	FEBRUARY	1
MARCH	2	MARCH	1	MARCH	0	MARCH	3
APRIL	0	APRIL	0	APRIL	0	APRIL	0
MAY	7	MAY	0	MAY	0	MAY	1
JUNE	2	JUNE	0	JUNE	0	JUNE	1
JULY	3	JULY	1	JULY	0	JULY	1
AUGUST	2	AUGUST	0	AUGUST	0	AUGUST	1
SEPTEMBER	2	SEPTEMBER	0	SEPTEMBER	0	SEPTEMBER	0
OCTOBER	1	OCTOBER	1	OCTOBER	0	OCTOBER	3
NOVEMBER	1	NOVEMBER	0	NOVEMBER	0	NOVEMBER	2
DECEMBER	2	DECEMBER	0	DECEMBER	0	DECEMBER	3
YTD TOTAL:	23	4		3		17	

GENOA**HANDY****HARTLAND****HOWELL****IOSCO****CALLS FOR SERVICE****CALLS FOR SERVICE****CALLS FOR SERVICE****CALLS FOR SERVICE****CALLS FOR SERVICE**

JANUARY	240	JANUARY	53	JANUARY	132	JANUARY	108	JANUARY	28
FEBRUARY	221	FEBRUARY	67	FEBRUARY	111	FEBRUARY	115	FEBRUARY	25
MARCH	260	MARCH	41	MARCH	119	MARCH	115	MARCH	26
APRIL	233	APRIL	53	APRIL	127	APRIL	123	APRIL	22
MAY	269	MAY	73	MAY	134	MAY	119	MAY	24
JUNE	255	JUNE	72	JUNE	121	JUNE	119	JUNE	28
JULY	261	JULY	85	JULY	141	JULY	135	JULY	45
AUGUST	246	AUGUST	72	AUGUST	126	AUGUST	124	AUGUST	40
SEPTEMBER	222	SEPTEMBER	72	SEPTEMBER	143	SEPTEMBER	120	SEPTEMBER	24
OCTOBER	236	OCTOBER	86	OCTOBER	142	OCTOBER	151	OCTOBER	31
NOVEMBER	245	NOVEMBER	58	NOVEMBER	138	NOVEMBER	125	NOVEMBER	37
DECEMBER	262	DECEMBER	75	DECEMBER	128	DECEMBER	137	DECEMBER	24
	2950		807		1562		1491		354

TICKETS WRITTEN**TICKETS WRITTEN****TICKETS WRITTEN****TICKETS WRITTEN****TICKETS WRITTEN**

JANUARY	48	JANUARY	14	JANUARY	44	JANUARY	54	JANUARY	5
FEBRUARY	40	FEBRUARY	17	FEBRUARY	33	FEBRUARY	42	FEBRUARY	4
MARCH	52	MARCH	17	MARCH	27	MARCH	51	MARCH	5
APRIL	50	APRIL	9	APRIL	58	APRIL	39	APRIL	3
MAY	39	MAY	20	MAY	41	MAY	31	MAY	11
JUNE	27	JUNE	18	JUNE	20	JUNE	62	JUNE	3
JULY	39	JULY	15	JULY	36	JULY	52	JULY	3
AUGUST	53	AUGUST	16	AUGUST	17	AUGUST	34	AUGUST	3
SEPTEMBER	28	SEPTEMBER	14	SEPTEMBER	33	SEPTEMBER	43	SEPTEMBER	0
OCTOBER	35	OCTOBER	19	OCTOBER	25	OCTOBER	41	OCTOBER	7
NOVEMBER	33	NOVEMBER	10	NOVEMBER	30	NOVEMBER	37	NOVEMBER	2
DECEMBER	66	DECEMBER	12	DECEMBER	22	DECEMBER	86	DECEMBER	5
	510		181		386		572		51

ARRESTS**ARRESTS****ARRESTS****ARRESTS****ARRESTS**

JANUARY	4	JANUARY	1	JANUARY	5	JANUARY	13	JANUARY	0
FEBRUARY	8	FEBRUARY	2	FEBRUARY	4	FEBRUARY	9	FEBRUARY	1
MARCH	5	MARCH	2	MARCH	2	MARCH	4	MARCH	1
APRIL	11	APRIL	2	APRIL	2	APRIL	13	APRIL	0
MAY	9	MAY	3	MAY	5	MAY	2	MAY	1
JUNE	4	JUNE	1	JUNE	3	JUNE	3	JUNE	2
JULY	7	JULY	3	JULY	2	JULY	4	JULY	0
AUGUST	4	AUGUST	6	AUGUST	4	AUGUST	4	AUGUST	1
SEPTEMBER	0	SEPTEMBER	1	SEPTEMBER	2	SEPTEMBER	4	SEPTEMBER	1
OCTOBER	6	OCTOBER	3	OCTOBER	2	OCTOBER	2	OCTOBER	1
NOVEMBER	2	NOVEMBER	2	NOVEMBER	3	NOVEMBER	6	NOVEMBER	1
DECEMBER	8	DECEMBER	0	DECEMBER	2	DECEMBER	6	DECEMBER	0
	68		26		36		70		9

MARION**OCEOLA****PUTNAM****TYRONE**

<u>CALLS FOR SERVICE</u>		<u>CALLS FOR SERVICE</u>		<u>CALLS FOR SERVICE</u>		<u>CALLS FOR SERVICE</u>	
JANUARY	71	JANUARY	109	JANUARY	56	JANUARY	116
FEBRUARY	72	FEBRUARY	108	FEBRUARY	55	FEBRUARY	101
MARCH	78	MARCH	86	MARCH	70	MARCH	102
APRIL	57	APRIL	86	APRIL	47	APRIL	138
MAY	75	MAY	114	MAY	72	MAY	112
JUNE	110	JUNE	110	JUNE	70	JUNE	163
JULY	91	JULY	121	JULY	75	JULY	163
AUGUST	85	AUGUST	88	AUGUST	68	AUGUST	124
SEPTEMBER	71	SEPTEMBER	85	SEPTEMBER	67	SEPTEMBER	130
OCTOBER	87	OCTOBER	108	OCTOBER	65	OCTOBER	143
NOVEMBER	98	NOVEMBER	112	NOVEMBER	63	NOVEMBER	142
DECEMBER	80	DECEMBER	79	DECEMBER	71	DECEMBER	114
	975		1206		779		1548

<u>TICKETS WRITTEN</u>		<u>TICKETS WRITTEN</u>		<u>TICKETS WRITTEN</u>		<u>TICKETS WRITTEN</u>	
JANUARY	10	JANUARY	39	JANUARY	5	JANUARY	8
FEBRUARY	9	FEBRUARY	23	FEBRUARY	6	FEBRUARY	10
MARCH	18	MARCH	32	MARCH	8	MARCH	8
APRIL	7	APRIL	35	APRIL	3	APRIL	21
MAY	16	MAY	100	MAY	2	MAY	27
JUNE	12	JUNE	52	JUNE	4	JUNE	24
JULY	13	JULY	69	JULY	6	JULY	19
AUGUST	11	AUGUST	47	AUGUST	2	AUGUST	12
SEPTEMBER	8	SEPTEMBER	27	SEPTEMBER	4	SEPTEMBER	20
OCTOBER	19	OCTOBER	30	OCTOBER	7	OCTOBER	23
NOVEMBER	12	NOVEMBER	32	NOVEMBER	7	NOVEMBER	23
DECEMBER	11	DECEMBER	27	DECEMBER	7	DECEMBER	4
	146		513		61		199

<u>ARRESTS</u>		<u>ARRESTS</u>		<u>ARRESTS</u>		<u>ARRESTS</u>	
JANUARY	1	JANUARY	4	JANUARY	1	JANUARY	2
FEBRUARY	6	FEBRUARY	3	FEBRUARY	0	FEBRUARY	4
MARCH	2	MARCH	2	MARCH	5	MARCH	2
APRIL	1	APRIL	6	APRIL	0	APRIL	0
MAY	1	MAY	2	MAY	0	MAY	7
JUNE	3	JUNE	4	JUNE	0	JUNE	3
JULY	2	JULY	1	JULY	1	JULY	3
AUGUST	3	AUGUST	1	AUGUST	2	AUGUST	3
SEPTEMBER	1	SEPTEMBER	5	SEPTEMBER	2	SEPTEMBER	0
OCTOBER	2	OCTOBER	1	OCTOBER	1	OCTOBER	1
NOVEMBER	4	NOVEMBER	1	NOVEMBER	2	NOVEMBER	6
DECEMBER	2	DECEMBER	2	DECEMBER	0	DECEMBER	1
	28		32		14		32

COMMUNICATION #2

Planning Commission Approved Regular Meeting &
Public Hearing Minutes- August 10, 2021

**TYRONE TOWNSHIP PLANNING COMMISSION
REGULAR MEETING APPROVED MINUTES
August 10, 2021**

PRESENT: Kurt Schulze, Jon Ward, Dan Stickel, and Rich Erickson

ABSENT: Perry Green, Steve Krause, and Bill Wood

OTHERS PRESENT: Ross Nicholson

CALL TO ORDER: The meeting was called to order by Chairman Stickel at 7:00 pm.

PLEDGE OF ALLEGIANCE:

CALL TO THE PUBLIC:

Kim Fracalossi asked the Planning Commission if there had been any new developments or updates to several open rezoning applications. Chairman Stickel indicated that there were no new updates.

Scott Dietrich stated that Ross Nicholson had indicated during a previous meeting that the developer was no longer pursuing the rezonings. Ross Nicholson indicated that as long as the applications are open, it is possible that the property owner may continue to pursue the rezonings. He stated that the Board would need to move to close the application during a regular meeting.

[Name not stated] inquired as to whether or not the Township would be making improvements to roads in the near future. Chairman Stickel indicated that the Township Board is responsible for making those decisions, not the Planning Commission.

APPROVAL OF THE AGENDA:

Kurt Schulze moved to approve the agenda as presented. Rich Erickson supported the motion. Motion carried by unanimous voice vote.

APPROVAL OF THE MINUTES:

1) 04/13/2021 Regular Meeting Minutes:

Kurt Schulze moved to approve the 04/13/2021 Regular Meeting Minutes as presented. Rich Erickson supported the motion. Motion carried by unanimous voice vote.

2) 05/11/2021 Regular Meeting Minutes:

Kurt Schulze moved to approve the 05/11/2021 Regular Meeting Minutes as presented. Jon Ward supported the motion. Motion carried by unanimous voice vote.

OLD BUSINESS:

1) Lake Urban Crossing Preliminary PUD:

Chairman Stickel asked Ross Nicholson where the best place to start the discussion would be. Ross Nicholson indicated that a revised site plan had been received since the previous discussion. He stated that the Planner had not yet had the opportunity to complete an updated review of the application. He suggested that the applicant and/or their authorized agent(s) begin with a summary of the revised site plan noting the changes that had been made since it was last reviewed. Ross Nicholson apologized that the Planner was not in attendance and for the new review not being completed. He suggested that the Planning Commission refrain from taking action on the application until at least after the new Planner review is available and after the public hearing is held.

Chairman Stickel asked the applicant to provide a summary of the project and explain the revisions that had been made to the site plan. Rade Beslac (agent) provided a summary of the proposed residential Planned Unit Development (PUD). He stated that the site contains approximately 160 acres with approximately 75 acres of buildable area. He stated that they had created a parallel plan based on the PUD standards in the Zoning Ordinance to come up with the approximate number of lots that may be permitted based on the Future Land Use Map zoning designations for the subject property. He stated that the Planning Commission may approve a density bonus of up to fifteen (15) percent if concessions are provided as described in Article 11 of the Zoning Ordinance. He stated that, based on the latest parallel plan, they are proposing a total of eighty-nine (89) lots. He stated that the proposed PUD would be developed in two (2) phases- Phase 1 taking access off of Runyan Lake Road containing fifty-two (52) lots and Phase 2 taking access from White Lake Road containing the remaining thirty-seven (37) lots. He stated that the Livingston County Road Commission (LCRC) has already granted preliminary approval for the proposed private road approach from Runyan Lake Road and is in the process of working with the LCRC for preliminary approval of a boulevard private road approach from White Lake Road. He stated that the proposed PUD would have access to the public sanitary sewer. He stated that, when acquired, the property already had seventy-four (74) Residential Equivalency Units (REU's) allocated on special assessment and additional REU's as necessary depending on the total number of lots that are approved. He stated that all of the proposed roads within the development would be built to LCRC public road standards. He stated that the proposed PUD would be a walkable community with several walking trails proposed.

Rade Beslac indicated that the site plan is still in the preliminary phase and a number of approvals from outside agencies would be required before a final site plan can be generated, inclusive of the Michigan Department of Environment, Great Lakes, and Energy (EGLE). Chairman Stickel asked if they had had any preliminary communication with EGLE regarding the wetlands on the site. Rade Beslac indicated that they have had preliminary discussion and asked that they verify the status of the wetlands on site.

Chairman Stickel asked Ross Nicholson to provide a summary of the PUD process and explain where the application is at in the review process. Ross Nicholson provided a summary of the

PUD process. He stated that the PUD process is two phases- preliminary review and final review. He stated that the application is currently in the preliminary review phase. He stated that the preliminary phase is more of a “big picture” review of the PUD development to determine whether or not the proposed development may be feasible and determine the maximum density that may be permitted. The final review phase follows agency reviews that cannot be obtained until after the preliminary phase including but not limited to EGLE, Fire Department, Livingston County agencies, and all other agencies having jurisdiction. He stated that the final review phase would take a much deeper dive into technical details that are necessary before final approval could be considered. He stated that, in the final review phase, the Planning Commission would review the agency reviews and request reviews of the complete application from the Township Planner and Engineer. An additional public hearing would be required at the Planning Commission level during the final review phase, He stated that if the Planning Commission finds that all requirements have been met, they may recommend approval to the Township Board. The Township Board may then hold an additional public hearing if deemed necessary and review the application prior to approving or denying the application. He stated that the complete PUD process is described in Article 11 of the Zoning ordinance which may be viewed on the Township’s website. Ross Nicholson indicated that this is the first PUD he has been involved with. He stated that the Township has not received an application for a PUD since the late 1990’s/early 2000’s, which is the only PUD that currently exists in the Township. He stated that, because no one currently sitting on the Planning Commission has any first-hand experience with PUD applications, they are practicing caution in reviewing the application to ensure all requirements are fulfilled prior to considering a favorable recommendation. Chairman Stickel stated that the Planning Commission will be holding the public hearing for the preliminary phase of the review process during tonight’s meeting. Ross Nicholson added that there will be a minimum of two (2) public hearings at the Planning Commission level (1 for preliminary and 1 for final). Chairman Stickel indicated that the Planning Commission does not feel like they are sufficiently equipped to make a decision on the application during tonight’s meeting.

Wilson Lahoud (applicant) stated that the subject property was purchased with 74 REU’s designated and that the proposed development would utilize an extension of the existing public sanitary sewer system. He stated that there are approximately eighty (80) acres of unusable land on the property which is nearly half of the total site area. He indicated that utilizing the public sanitary sewer for all lots would be better for the environment than utilizing on-site sewage treatment systems (septic). He stated that he believes the development would be complementary to existing development in the area and would be a benefit to the Township.

Chairman Stickel stated that the public hearing to be held shortly is for the preliminary PUD site plan. Kurt Schulze asked the applicants to describe the proposed stormwater treatment system. Rade Beslac indicated that the plan is to utilize as much of the existing wetlands as possible for treatment of stormwater as recommended by EGLE. He elaborated further on specific aspects of the proposed system. Chairman Stickel asked if they are proposing any type of pretreatment of stormwater prior to allowing flow into wetlands. Rade Beslac elaborated on the proposed pretreatment system. Chairman Stickel indicated that stormwater treatment will be very

important to prevent excess sediment from flowing into Runyan Lake. Rade Beslac acknowledged the importance of ensuring the stormwater treatment system is built to the standards required by the Livingston County Drain Commissioner (LCDC) and EGLE.

Jon Ward asked what the status of the proposed roadway locations were. Rade Beslac indicated that they have been working with the Livingston County Road Commission (LCRC). He stated that they have received preliminary approval for the proposed private road approach off of Runyan Lake Road and are currently seeking preliminary approval for the approach from White Lake Road. Jon Ward questioned whether or not the proposed approach off of Runyan Lake Road could be permitted based on the Zoning Ordinance requirement that “The PUD shall be located so that it can be accessed from a paved, County primary road able to safely serve the proposed development without adverse impact on the community” (Section 11.02.E). The Planning Commission briefly discussed. Chairman Stickel indicated that the standard in question was specific to the Tyrone Township Zoning ordinance and is not a standard required by the LCRC. Rich Erickson asked if the latest parallel plan should reflect the road layout shown in the latest site plan documents. Chairman Stickel indicated that the parallel plan has different requirements than the site plan and is only intended to determine the maximum allowable density for the development.

Kurt Schulze made a motion to temporarily recess the regular meeting and open the scheduled public hearing.

Chairman Stickel recessed the regular meeting to hold the scheduled public hearing for the Lake Urban Crossings Preliminary PUD application.

PUBLIC HEARING:

1) Lake Urban Crossing Preliminary PUD:

Chairman Stickel read the public hearing notice that was published in the Tri-County Times newspaper on 07/25/2021:

“Notice is hereby given the Tyrone Township Planning Commission will hold a Public Hearing on Tuesday, August 10, 2021, beginning at 7:30 pm at the Tyrone Township Hall located at 8420 Runyan Lake Road, Fenton, MI. The purpose for

the Public Hearing is:

1. To receive comments regarding the proposed Lake Urban Crossing preliminary residential Planned Unit Development (PUD) application. The subject property is vacant land located east of Runyan Lake Road and north of White Lake Road, Parcel ID numbers: 4704-03-300-020, 4704-10-100-024, 4704-10-100-025, 4704-10-200-025, and 4704-03-400-001. The property is zoned RE, Rural Estates.

Additional information is available at the Tyrone Township Planning & Zoning Department, 8420 Runyan Lake Road, Monday through Thursday, 9 a.m. to 5 p.m. Individuals with disabilities requiring auxiliary aids or services should contact the Tyrone Township Clerk, at (810) 629-8631, at least seven days prior to the meeting.”

Chairman Stickel explained the protocol for receiving public comments during the public hearing. He asked if the applicants, the Planning Commission, or Ross Nicholson had anything to add before opening the floor to accept public comments. Ross Nicholson reiterated the PUD procedure and emphasized that this would be the first public hearing for the preliminary PUD application.

Chairman Stickel opened the floor to receive public comments.

Michael Hayek (resident) stated that he was a US history teacher for forty (40) years. He stated that approval of the proposed development would result in the property values of existing nearby development would be negatively impacted. He stated that the sewer system would go into Runyan Lake. He stated that it sounds like the British had input into the project as if this were the times of the American Revolution. He stated that he says no to the proposed development.

Jim Sporer (resident) indicated that he had previously submitted a letter to the Planning Commission which he would like to read for the public record. He read from the letter which outlined specific concerns regarding wetland protection. He asked if a qualified wetland consultant has identified and staked the locations of wetland areas on the subject property. He asked who the consultant was and asked if the information was reported to and verified by EGLE. He indicated that twenty-four (24) of the lots shown on the parallel plan would not meet the required fifty (50) foot wetland setback as required by the Zoning Ordinance. He stated that Section 11.01 describes the intent of PUD's and Section 11.02 describes the open space requirements for PUD's. He indicated that he does not believe that the proposed development would meet the intent of PUD's or the open space requirements. He thanked the Planning Commission for taking the time to hear his comments.

Scott Dietrich (resident) stated that a lot of the information being discussed was not available on the Township website until recently. He stated that he contacted the Township regarding the information being unavailable and was told by someone that no one cares. He stated that he has concerns regarding a potential increase of traffic on White Lake Road if the proposed PUD is approved. He expressed concerns regarding stormwater treatment, specifically pertaining to fertilizers that may be present in runoff. He stated that if the stormwater treatment system were to fail, Runyan Lake would become polluted. He reiterated that he was very concerned about the potential increase in taxes. He stated that the proposed development contains too many lots which is inconsistent with the Township's intent of preserving the rural character of the community. He stated that the proposed development would contain too many homes.

Jeff Cooper (resident) stated that he lives adjacent to the area where the proposed road entrance from Runyan Lake Road is located. He stated that traffic is a major concern. He stated that approximately seventeen hundred (1,700) cars travel down that particular stretch of Runyan Lake Road daily. He stated that approval of the development would result in an increase in that number, adding to congestion. He stated that there is increased traffic due to construction on US-23. He stated that the applicant indicated that they received preliminary approval for the proposed road entrance from Runyan Lake Road two (2) years ago. He stated that the developer did not own adequate land to meet the LCRC requirements for a private road approach at that

time and had only acquired the space required more recently. Wilson Lahoud indicated that the LCRC review was pertaining only to the sight distance requirements at that time. He reiterated that it was a preliminary review based on the plans that were available during that time for line-of-sight review. Jeff Cooper continued. He stated that he is wondering if the widening of Runyan Lake Road would be necessary to add a turn lane to accommodate the proposed development. He stated that he had moved to the area for the rural character and feels that approval of the proposed PUD would be detrimental to said character.

Mark Glazewski (resident) asked for clarification on the sanitary sewer system that would be utilized for the proposed development. Ross Nicholson indicated that the sewer system is the Livingston Regional Sewer System (LRSS) which is a shared system between Hartland and Tyrone Townships. He stated that the outflow from the system is processed in Genessee County. Mark Glazewski asked if it would be the same system utilized by the development around Runyan Lake. Ross Nicholson indicated that it would be on the same system that serves the rest of the Township. Mark Glazewski stated that he heard that there were a number of beaver dams on the property. He stated that disturbing the natural habitat could significantly impact the subject property as well as Runyan Lake by altering the natural flow rates and patterns.

A gentleman in attendance (name not stated) asked if the Planning Commission had received a letter from the Runyan Lake Board of Trustees. Chairman Stickel indicated that the correspondence was received shortly before the meeting. The gentleman asked if Chairman Stickel could read the letter aloud for the public in attendance. Chairman Stickel indicated that he would read the letter prior to closing the public hearing.

Greg Johnson (resident) indicated that the proposed road entrance off of White Lake Road would be located directly across from his property. He stated that he has concerns regarding headlights facing towards his home at night. He stated that he also has safety concerns. He stated that many motorists speed in excess of the speed limit along that stretch of White Lake Road. He indicated that a combination of increased speed and low visibility lead to hazardous driving conditions in the area. He stated that the conditions of the roads themselves are also a safety concern. He stated that he has concerns that approval of the proposed PUD would lead to further/increased rates of deterioration of the road surface.

Kim LaClear (resident) stated that she lives on White Lake Road and frequently witnesses vehicles speeding in excess of eighty (80) miles per hour in the area. She stated that conditions are already unsafe and that the roadway would not accommodate additional traffic.

Dan Podeszwick (resident) indicated that a previous version of the site plan depicted a road layout which would be dangerous. He stated that he sees the plans have since been revised and the latest version alleviates those specific concerns. He stated that he agrees with many of the previous comments regarding safety concerns along White Lake Road.

Richard Sirna (resident) cited a statement from the Zoning Ordinance, Article 4, regarding the intent of the Farming Residential and Rural Estate zoning districts. He asked if the Michigan Department of Natural Resources (DNR) has any comments regarding the proposed development within and near wetland areas. He stated that he has concerns regarding stormwater runoff

flowing into Runyan Lake as well as concerns regarding disruption of the beaver dams on the subject property. He stated that the water levels on Runyan Lake fluctuate because of beaver dams. He stated that he has concerns regarding the potential traffic increase. He stated that Lake Urban is not so much a lake as it is wetlands. He stated that two additional cars per new dwelling would result in a significant traffic increase.

Mike Kohler (resident) stated that he lived near the subject parcel for fifty-nine (59) years. He stated that he is very familiar with the wetland areas. He asked if the developer was aware that pilons would be required in order to build on the subject parcel. He stated that the western portion of the subject property was assessed REU's when the public sanitary sewer system was installed. He noted that the cost for each REU as well as sewer billing rates are very expensive. He stated that many residents in the area were required to connect to the public sanitary sewer due to lake contamination from private septic systems. He provided some history of the wetland and lakes in the area. He stated that some of the new homes being built along Hartland Road will not be able to get favorable percolation test results and will likely want to have the sewer system expanded which would force all of the dwellings in between to connect as well.

Nick Branoff (resident) indicated that he lives in the Hills of Tyrone site condominium, just north of the subject property. He stated that he is Vice President of the Hills of Tyrone Association. He asked what the distances would be from the rear property boundaries of the units within the Hills of Tyrone to the proposed road which would take access from Runyan Lake Road. He stated that there is a retention pond located on the southwest corner of the Hills of Tyrone property which is currently overflowing due to sediment clogging the drains. He stated that the water travels southwest from the retention pond. He stated that he has lived adjacent to the wetlands on the subject property for twenty-five (25) years and is very familiar with the natural course of surface water flow. He stated that all of the water from the subject property ultimately flows into Runyan Lake. He indicated that there are significant wetland drainage issues on the subject property, noting that the beaver dams frequently cause major fluctuations in the water levels. He stated that much of the area shown on the site plan as open water contains invasive species of plants resulting in little to no visibility beneath the surface of the water.

Kim Fracalossi (resident) thanked the Planning Commission for all the work they do. She stated that she lives on White Lake Road. She stated that she feels the Planning Commission has already informally granted the project approval and are now working backwards to figure out a way to formally approve. She stated that she has issues with the proposed density of the development. She stated that the proposed density would conflict with the Master Plan and Future Land Use Map designation for natural resource preservation. She stated that the proposal conflicts with the spirit of the Master Plan. She stated that waiving a percentage of the open space requirement would conflict with the intent of the open space design requirements in the Zoning Ordinance. She stated that Section 11.01 from the Zoning Ordinance (PUD Intent) indicates that PUD's should be developed with consideration of the intent of development of the area in the Master Plan. She stated that the Master Plan does not indicate that the area would be suitable for the proposed PUD. She stated that the development would result in economic and

noneconomic costs that would impact existing development and residents in the area. She stated that the proposed development would result in loss of scenic landscape, loss of rural character, increased traffic congestion, increased noise pollution, increased light pollution, etc....

John Leece (resident) stated that he owns property to the north of the proposed PUD. He stated that his property drains into the wetland area on the subject property. He stated that the proposed development would likely result in his property becoming flooded.

Paul Lewis (resident) stated that he lives off of Carmer Rd. He asked where the proposed White Lake Road entrance would be located in relation to Carmer Rd. The Planning Commission pointed out the location. He stated that he moved from West Bloomfield which he feels is overdeveloped and congested. He stated that he moved to the area with his family to get away from the congestion and because he loves Runyan Lake. He stated that one of his biggest concerns is the potential impacts to Runyan Lake. He stated that he is worried that the proposed development may result in reduction of his property value due to negative impacts to Runyan Lake.

John Fialka (resident) stated that he has lived on Runyan Lake since 1968. He stated that everyone has already expressed their concerns but wanted to make note that he was also concerned about potential impacts to Runyan Lake and the surrounding areas including sediment runoff, pollution, and increased traffic.

Herman Ferguson (resident and Township Trustee) stated that he has lived in the Township for forty-five (45) years and he sincerely cares about the community. He stated that he wishes that he would see public turnout at the Township Board meetings as he sees tonight. He stated that he is glad that he came and is happy to see the passion and public participation. He stated that he represents all residents of the Township and wants to hear from them so he can make informed decisions.

Nick Branoff (resident) asked if the developer plans to reroute the drainage flow from Denton Creek to Runyan Lake and whether or not the beaver dams would be removed from the subject property. Chairman Stickel stated that the plans do not depict any change to the water system he described. Nick Branoff asked how the stormwater drainage system would work. Chairman Stickel elaborated. Rade Beslac indicated that they have no intent of moving the beaver dams.

James May (resident) stated that he has concerns about the volume of water and sediment that could potentially flow into Runyan Lake. He stated that he would like to see additional calculations to confirm that the drainage system would work.

Resident (name not stated) indicated that the developer could easily obtain a permit to remove the beaver dams from the property through the Michigan DNR.

Scott Dietrich (resident) stated that the residents have expressed a consensus regarding road safety on White Lake Road.

Sara Dollman-Jersey (resident) thanked Ross Nicholson for his explanation of how the PUD process works. She stated that she is inspired by the number of people in attendance engaging in

the discussion. She asked if the application would be included on future Planning Commission meeting agendas between the preliminary and final application. Ross Nicholson provided clarification. He indicated that, following preliminary review, the applicants would seek agency reviews and put together an application meeting the requirements for final PUD review before returning to the Planning Commission. Sara Dollman-Jersey asked how she can obtain the application documents. Ross Nicholson indicated that the application documents are available in the meeting packet documents on the Township website.

Jannette Ropeta (resident) thanked the Planning Commission and Ross Nicholson for the work they do. She stated that she has frequently been attending Township meetings and is very interested in what is going on in Township government. She stated that she was happy to see so many residents in attendance and hopes to see consistent turnout moving forward. She stated that she is recording the meeting because she was told by someone at the Township that nobody cares. She stated that she has started a Facebook group called Tyrone Township Watch to ensure that all meetings are recorded and livestreamed for those who are unable to attend meetings in-person.

Michael Ewles (resident) stated that he and his wife own two properties in the area and have lived in the Township for twenty-five (25) years. He stated that he has concerns with the potential for increased light pollution as a result of the proposed development. He stated that he very much enjoys the natural beauty of the Township and is concerned that increased traffic and additional dwellings would lead to increased light pollution. He stated that he loves and cares about Runyan Lake. He stated that the wetlands on the subject property are significant, and development of the area would negatively impact Runyan Lake.

Resident (name not stated) asked the Planning Commission to point out where the proposed development would be located in relation to her property. The Planning Commission pointed it out on the map.

Resident (name not stated) asked if residents in the area could launch kayaks into the water on the subject property. Rade Beslac responded.

Chairman Stickel read a letter addressed to the Planning Commission from Runyan Lake Incorporated (association). The letter summarized the intent and purpose of the association and outlined concerns regarding drainage/stormwater management, exploitation of natural features, overdevelopment, sediment runoff control, etc... The letter recommended that the Planning Commission require specific review/approvals from other agencies having jurisdiction prior to granting preliminary PUD approval. The letter also stated concerns regarding potential incompatibility of the development with the Zoning Ordinance requirements for the zoning district as well as concerns regarding potential contamination of Runyan Lake. The letter also indicated that it would be illegal for the development to create runoff that would impact nearby properties. The letter concluded with a request to the Planning Commission that they recommend denial of the application until the aforementioned concerns are sufficiently addressed.

Chairman Stickel asked if there were any additional public comments. None were received. He asked the Planning Commission if they had any questions or comments. Rich Erickson stated that the new road layout should be shown on the parallel plan and indicated that he would like to know if it would be possible to reduce the number of lots in the PUD. Jon Ward asked if a traffic impact study would be required for preliminary PUD review. Chairman Stickel indicated that a study would be required as part of a complete final PUD application. The Planning Commission asked the applicants if they have received feedback from any other agencies having jurisdiction aside from the LCRC and EGLE. Rade Beslac indicated that they have not received reviews or approvals from other agencies because preliminary PUD approval is required prior to seeking them. Chairman Stickel asked for clarification of the status of the wetlands on the subject property. Rade Beslac indicated that they have hired a wetland consultant to flag and delineate the wetlands on the property and confirmed the status of the wetland areas with EGLE. The Planning Commission briefly discussed. Chairman Stickel reiterated the requirements for preliminary PUD review versus final PUD review. He stated that the Planning Commission would not be making a recommendation tonight. There was a brief discussion between the Planning Commission and members of the public. The Planning Commission and Ross Nicholson discussed the timeline and requirements for the review process.

Chairman Stickel stated that they have received many comments regarding concerns primarily regarding increased traffic and stormwater management. He asked the applicants for clarification on how the proposed roads would be built within the PUD. Rade Beslac stated that the roads would be built to LCRC specs but managed by the condominium association. Chairman Stickel recommended that they should draft road maintenance agreements prior to submitting the application for final PUD review. Rade Beslac indicated that they would include maintenance agreements as well as drafts of the condominium documents including the master deed and bylaws.

Chairman Stickel asked if there were any additional comments from the Planning Commission. Jon Ward stated that the PUD standards require that the development be located on a primary road. It was determined that Runyan Lake is not considered to be a primary road. The Planning Commission briefly discussed. Chairman Stickel indicated that that would need to be evaluated and further discussed prior to making a recommendation.

Chairman Stickel closed the public hearing at 8:54 pm.

NEW BUSINESS:

2) Vale Royal Barn Special Land Use Amendment

The applicant requested that the item be deferred until a future meeting when the Planner is in attendance.

The item was tabled.

CALL TO THE PUBLIC:

Scott Dietrich (resident) stated that White Lake Road is a mess. He stated that all residents in attendance agree. He stated that the proposed Lake Urban PUD includes too many wetland areas and is too dense of a development. He reiterated concerns regarding safety along White Lake Road.

Jeff Cooper (resident) expressed safety concerns with White Lake Road.

Kim Fracalossi (resident) asked for a status update on the Master Plan. Chairman Stickel indicated that they have not formally begun the master planning process.

Jannette Ropeta (resident) stated that it is hard for residents to participate in the master planning process if they are unaware of when the discussions will take place. She stated that she feels the Township is attempting to hold off on discussion until the public loses interest.

ADJOURNMENT: The meeting was adjourned by Chairman Stickel at 9:04 pm.

APPROVED

COMMUNICATION #3

Planning Commission Approved Regular Meeting
Minutes- August 18, 2021

**TYRONE TOWNSHIP PLANNING COMMISSION
REGULAR MEETING APPROVED MINUTES
August 18, 2021**

PRESENT: Vice-Chairman Kurt Schulze, Commissioners Rich Erickson, Jon Ward, and Steve Krause

OTHERS PRESENT: Karie Carter and Zach Michels

ABSENT: Chairman Dan Stickel, Commissioners Bill Wood and Perry Green

CALL TO ORDER: The meeting was called to order by Vice-Chairman Kurt Schulze at 6:05 pm.

PLEDGE OF ALLEGIANCE:

CALL TO THE PUBLIC:

A member of the public spoke about some intersections he felt were dangerous in the Township.

APPROVAL OF THE AGENDA:

Commissioner Rich Erickson moved to approve the agenda as presented. Commissioner Steve Krause seconded. The motion carried.

APPROVAL OF THE MINUTES: None

OLD BUSINESS: None

The meeting was suspended at 6:09 pm to wait for the arrival of Zach Michels. The meeting reconvened at 6:13 pm.

NEW BUSINESS:

1) Vale Royal Barn Special Land Use Amendment

Vice-Chairman Schulze asked the applicants if they had anything they wanted to say or ask about their application before hearing from Carlisle Wortman. They said they would wait until after Zach Michels did his review. He explained that the applicant is requesting to amend the description of use (use statement) governing the previously approved site plan and special land use for a public/private recreation area/facility (event/wedding barn).

He went over all of the changes the applicants were requesting, which included changing the hours of operation on weekdays to 9:00 am to 11:00 pm (the original hours were 2:00 pm to 9:00 pm), allowing for later music on weekdays, allowing for more events on weekends (up to two events on up to six weekends rather than the current one event per weekend), and expanding the potential for subcontracted use of the facility (renting out for other types of events like Boy

Scouts, etc.). They would like to increase the number of participants on weekdays to 163; currently, it is 60.

Mr. Michels stated that the commercial nature of the use and the proposed changes to the description of use statement are generally consistent with the intent of the future land use map. He stated that the proposed change does not appear to have an impact on any of the natural resources on the site, nor would the potential increase in the volume of vehicles cause any impact.

He suggested the Planning Commission consider converting the grass parking area to gravel. He also said they should consider if it needs additional information about employee parking (location, etc.). Other items Mr. Michels said the applicants should provide are confirmation that the existing utilities will be adequate to accommodate the potential increased volume of guests, and that there will be no changes to the existing landscaping, screening, and lighting. He said they should confirm there will be no additional signs than what was previously approved on their site plan.

Mr. Michels said that the Planning Commission may want to consider some changes to sound and trash management if there are concerns about their potential impact on surrounding properties. He said that the proposed amendment would likely create increased volumes of traffic, as the capacity will be increased for events on weekdays. However, the maximum volume for any single event will not exceed the current maximum volume. He recommended the Planning Commission consider consulting the Livingston County Road Commission to determine if any additional improvements may be necessary for the driveway.

Mr. Michels talked about the music and said the noise levels would have to follow the ordinance on how loud it can be. If there is concern about noise, the ordinance states that outdoor music ends at 10:00 pm.

He said there may be a need for more trash bins with an increase in guests. There is no need to change any parking areas; there are enough spaces for the proposed increase of guests. Vice-Chairman Schulze asked if the 163 parking spots were for the guests and not the staff. Mr. Michels said it was just for the guests; staff and employees park off-site.

The applicants asked to eliminate the requirement to submit monthly reports. They appear to have operated without any significant issues since originally approved. Mr. Michels felt the Planning Commission should consider the owner prepare and submit an annual report instead of the monthly reports.

The site plan needs to be stamped by a licensed professional. It should show the locations of any trash dumpsters, as well. If parking will change, it should be shown on the site plan.

After Mr. Michels completed his review, Vice-Chairman Schulze asked the Planning Commission to share any thoughts or ask any questions they may have. Commissioner Krause asked about converting the grass to gravel. He said if it gets muddy, it would get messy for their guests. The applicant stated that the grass area is high and dry, it is mostly clay so it stays

compact. They keep the grass cut very short. If it rains, gravel tends to spread and cause more holes for guests to trip on.

Vice-Chairman Schulze asked if they were expanding the number of months they would operate. The applicants stated they would not – they will still hold events from April through October.

Commission Krause agreed that grass is easier to maintain than gravel. He then asked if the off-site parking for staff/vendors was an issue. Mr. Michels said it is not an issue. The applicant said they have only maxed out their parking one time. Vice-Chairman Schulze asked about other events that would be hosted there and where the staff would park. Ms. Johnson stated that no event will ever be over 150 guests.

There have never been complaints against them. The neighbor who lives to the north of them has stated she is very pleased with the operation so far. The music cannot be heard from afar, especially because of the noise from US-23. Vice-Chairman Schulze asked if they had their fire suppression system installed; Ms. Johnson confirmed that they did.

In regards to parking, if there are a bunch of cars parked up and down the road (Old US-23) that would be a violation of the special land use approval. The township could then put them on notice, give them a warning. If it were to happen multiple times, the special land use could be revoked.

The Planning Commission discussed approving the request contingent upon the changes that were discussed were made. The site plan needed to be updated showing dumpsters, dates of operation. The applicants need to prove adequate sewer/bathrooms/utilities for the increased use. The use statement needs to be revised. The Planning Commission agreed that the applicants can convert from monthly reports to annual reports.

Commissioner Erickson moved to conditionally approve the Site Plan/Special Land Use Amendment with the conditions that the site plan has the dumpster locations and has a stamp and the site plan has the same notes to be consistent with the use statement and that they amend to require an annual report. Commissioner Krause seconded. The motion carried.

CALL TO THE PUBLIC: A few members of the public spoke.

ADJOURNMENT: The meeting was adjourned by Vice-Chairman Schulze at 7:05 pm.

COMMUNICATION #4

Planning Commission Meeting & Public Hearing
Synopsis- January 11, 2022

**TYRONE TOWNSHIP PLANNING COMMISSION
REGULAR MEETING & PUBLIC HEARING SYNOPSIS
January 11, 2022 7:00 p.m.**

**Note: This meeting was held at the Tyrone Township Hall with remote access via Zoom
Videoconferencing.**

Note: This meeting was recessed at 7:30 pm for a public hearing.

PRESENT: Kurt Schulze, Jon Ward, Steve Krause, and Rich Erickson

ABSENT: Bill Wood, Chet Schultz, and Garrett Ladd

OTHERS PRESENT: Ross Nicholson and Zach Michels (CWA)

CALL TO ORDER: The meeting was called to order at 7:00 pm

PLEDGE OF ALLEGIANCE:

CALL TO THE PUBLIC: Several public comments were received.

APPROVAL OF THE AGENDA: New Business item #2 (Private Road Standards) was moved ahead of all other business items.

APPROVAL OF THE MINUTES:

- 1) 08/10/2021 Regular Meeting & Public Hearing Minutes: Approved as amended.
- 2) 08/18/2021 Regular Meeting Minutes: Approved as presented.

NEW BUSINESS #2: Private Road Standards

The Planning Commission briefly discussed a request from the Runyan Lake Heights Association to consider partial paving of a private road within the subdivision. Zach Michels indicated that the Zoning Ordinance allows for modifications of private road standards for safety purposes. The Planning Commission briefly discussed what information they would need from the Association to consider the request. The Planning Commission determined that they would need plans and a written description in accordance with the standards in Article 24 of the Zoning Ordinance to make a determination. No action was taken.

The regular meeting was recessed at 7:30 pm to hold the scheduled public hearing.

PUBLIC HEARING #1: Niemi Shared Private Driveway

Zach Michels summarized the application and read through the review letter. The Planning Commission briefly discussed the application. A public comment was received.

PUBLIC HEARING #2: Sultani Caregiver Special Land Use

Zach Michels summarized the application and read through the review letter. The Planning Commission briefly discussed the application. A number of public comments were received.

OLD BUSINESS #1: Niemi Shared Private Driveway

The Planning Commission briefly discussed the application documents. The Planning Commission recommended Township Board approval with conditions.

OLD BUSINESS #2: Master Plan

The Planning Commission discussed possible survey options for the master planning process. It was determined that the primary focus of the next workshop meeting would be to focus on master plan survey questions and timelines for the master planning process.

NEW BUSINESS #1: Sultani Caregiver Special Land Use

The Planning Commission discussed the application amongst themselves and the applicants. They provided direction to the applicants/agents, requesting additional information and revisions to the site plan. The item was tabled pending the receipt of the requested information.

CALL TO THE PUBLIC: Several public comments were received.

MISCELLANEOUS BUSINESS:

Next Workshop Meeting: The next Workshop meeting was scheduled for Wednesday, 01/19/2022, beginning at 6:00 pm.

ADJOURNMENT: The meeting was adjourned at 9:44 pm.

UNFINISHED BUSINESS

#1

Lake Urban Crossing PUD Preliminary Site Plan

Township Board
Tyrone Township
8420 Runyan Lake Road
Fenton, MI 48430

**Subject: Agenda Request, Lake Urban Crossings Preliminary PUD Plan
Recommendation for Approval**

Dear Township Board Members:

At our Planning Commission meeting held 11/30/2021 the Planning Commission supported a favorable recommendation of the Preliminary Site Plan for Lake Urban Crossing PUD application.

Motion:

Kurt Schulze made a motion to recommend Township Board approval of the Lake Urban Crossing preliminary PUD application noting that the Planning Commission discussed and made determinations for items 1-11 from the Carlisle Wortman Associates review letter dated 11/04/2021 under the list of items requiring Planning Commission determination (beginning at the bottom of page 26). The recommendation is conditional upon items 1-10, excluding item #4, from the potential conditions section of the Carlisle Wortman Associates review letter dated 11/04/2021 being addressed as part of a final PUD plan application following agency reviews (at the bottom of page #27).

Steve Krause supported the motion. Motion carried 3:2. Votes: Yes- Shultz, Schulze, Krause / No- Erickson, Ladd.

Summary:

The applicant proposes 88 total lots being built in 2 phases of construction. Phase 1 consists of 42 lots, with entrance from Runyan Lake Rd North of White Lake and Phase 2 consists of 46 lots with entrance from White Lake Rd east of Runyan Lake Rd.

There were many items that the Planning Commission reviewed in the 11/30/2021 meeting and agreed with allowing as part of Preliminary concept

approval. More specifically, the Planning Commission went through the list of items that require Planning Commission determinations (1-11) listed in the Carlisle Wortman Planning Report dated 11/4/2021 on page 26 and 27 (see excerpt at the end of this document).

Other items of note are that the applicant did provide a Traffic Impact Study for the years 2016- 2020 and also agreed to remove 4 lots that border Tyrone Hills subdivision as well as agreeing that they will put a cul-de-sac at the end of Valencia as directed by the Fire Department. The required public hearing was held on 08/10/2021 at 7:30 pm.

Regards,

Rich Erickson

Chairman -Tyrone Township Planning Commission

Excerpt From 11/04/2021 Carlisle/Wortman Assoc., Inc review letter RE: Lake Urban Crossings:

1. *The Planning Commission should determine if the 1" = 150' scale is adequate for substantial review of the preliminary plan.*

The Planning Commission determined that the scale provided was adequate for preliminary review.

2. *The Planning Commission should determine whether or not to waive all or a part the requirement to show the location of existing structures within 500 feet of the lot as part preliminary review.*

The Planning Commission waived the requirement to show the location of all existing structures within 500 feet of the subject property for preliminary review.

3. *The Planning Commission should determine if it will require a traffic impact statement, as outlined in Table 23.1 Requirements for Various Types of Traffic Impact Studies, as part of preliminary review.*

The Planning Commission requested and received a traffic impact statement (attached).

4. *The Planning Commission should determine if a statement of use is necessary for preliminary review.*

The Planning Commission waived the use statement requirement for preliminary review but noted that one will be required as part of a complete application for final PUD plan review.

5. *The Planning Commission should determine if the parallel plan is reasonably feasible.*

The Planning Commission determined that the parallel plan is reasonably feasible.

6. *The Planning Commission should determine if the proposed developmental standard modifications are consistent with sound planning and design, are necessary for the preservation of significant features or open space on the site or are otherwise necessary to result in a higher-quality design.*

The Planning Commission determined that the proposed developmental standard modifications are consistent with sound planning and design, are necessary for the preservation of significant features or open space on the site or are otherwise necessary to result in a higher-quality design.

7. *The Planning Commission should determine if the criteria for additional residential lots are satisfied and, if so, what incremental bonus from 0% to 5% the planned unit development qualifies for.*

The Planning Commission determined that the requirements for additional residential lots are satisfied and granted an incremental bonus of 15% (total) based on the criteria listed in Section 11.02.H.2 of the Zoning Ordinance

8. *The Planning Commission should determine if the site characteristics, surrounding natural features, and proposed design features lend themselves to a reduced open space requirement.*

The Planning Commission determined that, due to the challenges surrounding site characteristics inclusive of wetlands and other natural features, there was justification to reduce the open space requirement. While the plans fall short of the upland open space requirement, it includes a substantial amount of wetland and submerged land open space and ultimately satisfies the intent of the open space design requirements as described in the Zoning Ordinance.

9. *The Planning Commission should consider whether or not it would recommend using non-contiguous property to satisfy open space area if a waiver is not granted from the 30% minimum.*

The Planning Commission determined that non-contiguous open space should not be required as the amount of open space area provided ultimately satisfies the intent of the open space design requirements as described in the Zoning Ordinance.

10. *The Planning Commission should determine if alternative screening would be warranted.*

The Planning Commission determined that alternate screening would not be warranted for the preliminary PUD plan but would be reevaluated if the applicant returns for final PUD plan review.

11. *The Planning Commission should determine if the criteria for preliminary site plan, special land use, and planned unit developments are satisfied.*

The Planning Commission determined that all requirements for preliminary PUD plan review have been satisfied.

PRELIMINARY SITE P.U.D. CONDOMINIUM PLANS OF: LAKE URBAN CROSSINGS

PART OF SECTIONS 3 & 10, T4N-R6E,
TYRONE TOWNSHIP LIVINGSTON COUNTY, MICHIGAN

L E G E N D

○	FOUND IRON	⊕	PROP STORM MANHOLE
⊕	SET IRON W/CAP NO. 55012	⊕	PROP STORM CATCHBASIN
⊕	FOUND MONUMENT	⊕	PROP STORM SEWER
⊕	EX SURFACE ELEVATION	⊕	PROP STORM DRAINAGE OUTLET STRUCTURE
⊕	EX SURFACE CONTOUR	⊕	PROP DRAINAGE SWALE
⊕	EX ROAD SIGNS	⊕	PROP STORM PIPE END SECTION
⊕	EX UTILITY POLE	⊕	PROP DETENTION BASIN
⊕	EX SERVICE PEDISTAL	⊕	PROP SANITARY MANHOLE
⊕	EX MAILBOX	⊕	PROP SANITARY SEWER
⊕	EX OVERHEAD POWERLINES	⊕	PROP 6" SANITARY LEAD
⊕	EX GAS, ELECTRIC & TELEPHONE	⊕	PROP EASEMENT LINE
⊕	EX U.G. GAS MARKER	⊕	PROP DRAINAGE FLOW ARROW
⊕	EX STORM SEWER	⊕	SAN
⊕	EX STORM MANHOLE	⊕	STM
⊕	EX STORM CATCHBASIN	⊕	EASE
⊕	EX SANITARY SEWER	⊕	HOUSE
⊕	EX SANITARY MANHOLE	⊕	CONC
⊕	HSE	⊕	ASPH
⊕	CONC	⊕	EX
⊕	ASPH	⊕	CONCRETE
⊕	EX	⊕	ASPHALT
		⊕	EXISTING
		⊕	PROP DECIDUOUS TREE
		⊕	PROP CONIFEROUS TREE

PROPERTY DESCRIPTIONS:

PARCEL 4704-03-300-020
A PARCEL OF LAND LOCATED IN SECTIONS 3, 4 & 10, T4N-R6E, TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 3; THENCE, ALONG THE WEST LINE OF SAID SECTION 3, N02°13'15"E 470.44 FEET (PREVIOUSLY RECORDED AS 486.33 FEET) TO THE POINT OF BEGINNING; THENCE N65°37'27"W 46.69 FEET (PREVIOUSLY RECORDED AS 47.28 FEET); THENCE N05°07'27"E 539.49 FEET; THENCE S52°05'06"E 47.73 FEET; THENCE N37°52'29"E 200.00 FEET; THENCE N52°05'06"W 217.80 FEET TO THE CENTERLINE OF RUNYAN LAKE ROAD; THENCE ALONG SAID CENTERLINE OF ROAD, N37°52'28"E 64.28 FEET; THENCE N02°13'15"E, 3.47 FEET TO THE NORTHWEST CORNER OF THE SOUTH 1/2 OF THE SOUTHWEST 1/4 OF SECTION 3; THENCE ALONG THE NORTH LINE OF THE SOUTH 1/2 OF THE SOUTHWEST 1/4 OF SAID SECTION 3, S88°20'05"E 2667.30 FEET TO THE NORTH-SOUTH 1/4 LINE OF SAID SECTION 3; THENCE, ALONG SAID NORTH-SOUTH 1/4 LINE, S02°27'26"W 1351.31 FEET TO THE SOUTH 1/4 CORNER OF SAID SECTION 3, ALSO THE NORTH 1/4 CORNER OF SAID SECTION 10; THENCE, ALONG THE SOUTH LINE OF SAID SECTION 3, ALSO THE NORTH LINE OF SAID SECTION 10, N89°11'05"W 665.42 FEET; THENCE, ALONG THE EAST LINE OF THE EAST 1/2 OF THE NE 1/4 OF THE NW 1/4 OF SAID SECTION 10, S02°08'22"W 796.29 FEET TO A POINT ON THE PHYSICAL CENTERLINE OF WHITE LAKE ROAD AS LOCATED ON 04/29/04; THENCE, ALONG SAID CENTERLINE THE FOLLOWING 5 COURSES: (1) N63°15'06"W 103.35 FEET, (2) N67°15'52"W 129.30 FEET, (3) N69°15'13"W 222.75 FEET, (4) N68°42'53"W 327.42 FEET, (5) N67°58'43"W 292.71 FEET; THENCE N20°48'33"E 450.97 FEET (PREVIOUSLY RECORDED AS 460.0 FEET); THENCE N65°37'27"W 1219.96 FEET TO THE POINT OF BEGINNING. SAID PARCEL CONTAINS 89.586 ACRES OF LAND AND IS SUBJECT TO THOSE PARTS NOW USED AS RUNYAN LAKE ROAD AND WHITE LAKE ROAD.

PARCEL 4704-10-100-024
SEC. 10 T4N, R6E, 20 FT. ON W AND N SIDES OF E 1/2 OF NE 1/4 OF NW 1/4 LYING N OF HWY. 1A

PARCEL 4704-10-100-025
SEC. 10 T4N R6E ALL THAT PART OF E 1/2 OF NE 1/4 OF NW 1/4, LYING NLY OF WHITE LAKE RD, EXC THE N 20 FT & THE W 20 FT THEREOF 17 AC M/L

PARCEL 4704-10-200-025
SEC. 10 T4N R63 W 13 AC OF NLY 15 AC OF W 1/2 OF NE 1/4 32 RODS (528 FT) N & S ON E BOUNDARY LINE & 28 RODS (462 FT) N & S ON W BOUNDARY LINE

PARCEL 4704-03-400-001
SEC. 3 T4N, R6E, SW 1/4 OF SE 1/4 40A

FLOOD PLAIN NOTE:

THIS PROPERTY IS LOCATED IN AN AREAS OF MINIMAL FLOODING, NOT WITHIN A STUDIED FLOOD ZONE, PER FLOOD INSURANCE RATE MAP NO. 26093C0125D AND IS NOT A PRINTED PANEL.

WETLAND NOTE:

ACCORDING TO THE FINAL WETLAND INVENTORY MAPS OF MICHIGAN, THERE ARE WETLANDS ON AND THIS PROPERTY. THE WESTERLY 90 ACRE WETLANDS HAVE BEEN FLAGGED BY ASTI ENVIRONMENTAL, INC ON MARCH 20, 2017, AND THE EASTERLY 80 ACRES FLAGGED BY MARX WETLANDS, LLC ON SEPTEMBER 7, 2018, AND THE WETLAND AREAS FLAGGED ARE AS SHOWN ON THIS SURVEY. BOTH REPORTS WILL BE MADE AVAILABLE UPON REQUEST.

PROJECT NARRATIVE:

IT IS NOT ANTICIPATED THAT THERE WILL BE ANY SUBSTANTIAL INCREASE IN DUST, ODOR, SMOKE, FUMES, NOISE, OR LIGHTS. THE DEVELOPER AND CONTRACTOR WILL BE REQUIRED TO COMPLY WITH ANY APPLICABLE ZONING ORDINANCE REQUIREMENTS REGARDING THESE ITEMS.

EXISTING ZONING INFORMATION:

ACCORDING TO THE CURRENT TYRONE TOWNSHIP ZONING ORDINANCE & MAP, THIS PROPERTY IS CURRENTLY ZONED RE (RURAL ESTATES), AND IS SUBJECT TO THE FOLLOWING CONDITIONS:

- 1) MINIMUM LOT SIZE = 76,230 SFT OR 1.75 ACRES
- 2) MINIMUM LOT WIDTH = 200 FEET
- 3) FRONT SETBACK = 100 FEET
- 4) SIDE SETBACK = 20 FEET, TOTAL = 40 FEET
- 5) REAR SETBACK = 75 FEET
- 6) MAXIMUM BUILDING HEIGHT = 30 FEET
- 7) MAXIMUM LOT COVERAGE = 25%

PROPOSED P.U.D. DEVELOPMENT STANDARDS:

THE PROPOSED LAKE URBAN CROSSING PLANNED UNIT DEVELOPMENT (P.U.D.) WILL BE SUBJECT TO THE FOLLOWING CONDITIONS:

- 1) MINIMUM LOT SIZE = 21,780 SFT OR 0.50 ACRES (PHASE 1)
MINIMUM LOT SIZE = 18,000 SFT OR 0.41 ACRES (PHASE 2)
- 2) MINIMUM LOT WIDTH = 90 FEET (W/SEWER)
- 3) FRONT SETBACK = 35 TO 50 FEET
- 4) SIDE SETBACK = 15 FEET, TOTAL = 30 FEET
- 5) REAR SETBACK = 35 FEET
- 6) OPEN WATER SETBACK = 50 FEET
- 7) MAXIMUM BUILDING HEIGHT = 30 FEET
- 8) MAXIMUM LOT COVERAGE = 35%

STANDARD NOTES FOR SITE PLANS:

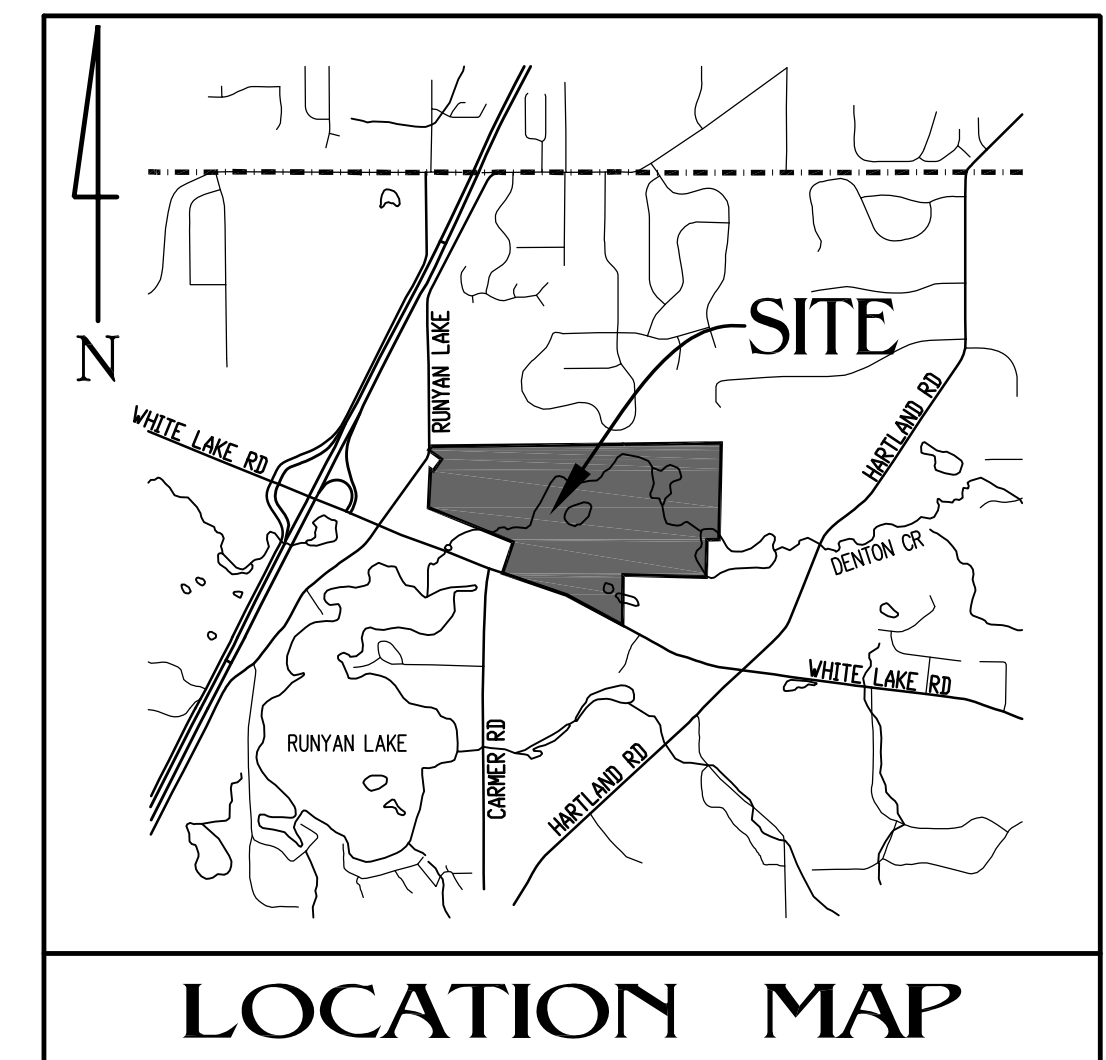
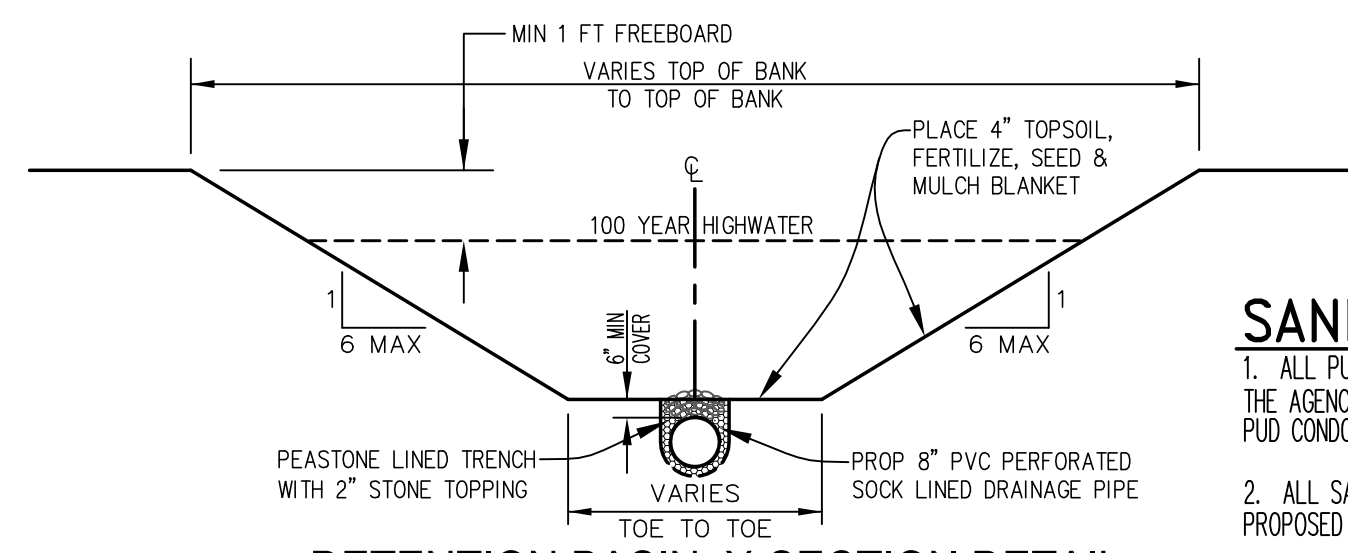
- A. EXTENSION OF PUBLIC UTILITIES:** ALL PUBLIC SANITARY SEWER SHALL BE EXTENDED TO THE FURTHEST LIMITS OF THE PROPERTY, INCLUDING CORNER LOTS, WITH THE PIPE SIZE AND MATERIAL APPROVED BY TYRONE TOWNSHIP. THE REQUIREMENTS TO EXTEND THE PUBLIC SANITARY SEWER ALONG BOTH PROPERTY LINES WILL BE REVIEWED.
- B. SOIL EROSION:** THE DEVELOPER SHALL SUBMIT A DETAILED SOIL EROSION AND SEDIMENTATION CONTROL PLAN AND OBTAIN AN ACT 451 PART 91, SOIL EROSION AND SEDIMENTATION CONTROL PERMIT. THIS INCLUDES THE PAYMENT OF FEES AND THE PROVIDING OF NECESSARY BONDS. NO EARTH CHANGES OR EXCAVATION SHALL BE STARTED PRIOR TO THE ISSUANCE OF THIS PERMIT. THE DEVELOPER SHALL PROTECT ALL EXISTING AND PROPOSED STORM SEWER FACILITIES ON AND ADJACENT TO THE SITE DURING EXCAVATION AND CONSTRUCTION. ALL SEDIMENT SHALL BE CONTAINED ON SITE. ANY SILT IN COUNTY DRAINS, STORM SEWER, CULVERTS, ETC. AS A RESULT OF THIS PROJECT, SHALL BE REMOVED BY THE DEVELOPER AT THE COST OF THE DEVELOPER.
- C. FLOOD PLAIN OR WETLAND CONSTRUCTION:** THE DEVELOPER SHALL APPLY TO THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY (EGLE) FOR A PERMIT FOR THE ALTERATION AND/OR OCCUPATION OF A FLOOD PLAIN OR FLOODWAY, AND/OR WETLANDS, AS REQUIRED UNDER PA 451. EVIDENCE OF THIS PERMIT MAY BE REQUIRED PRIOR TO PLAN APPROVAL BY TYRONE TOWNSHIP AND/OR LIVINGSTON COUNTY DRAIN COMMISSIONER (LDC).
- D. NPDES STORM WATER DISCHARGE PERMIT:** THE OWNER OF THE PROPERTY SHALL OBTAIN A NPDES STORM WATER DISCHARGE PERMIT FOR CONSTRUCTION ACTIVITIES FROM EGLE AS REQUIRED UNDER PUBLIC ACT 451. THE NOTICE OF COVERAGE FORM SHALL BE SUBMITTED THROUGH LIVINGSTON COUNTY DRAIN COMMISSIONER WITH THE SOIL EROSION CONTROL PERMIT APPLICATION. ALL EGLE FEES SHALL ACCOMPANY THE NOTICE OF COVERAGE. EVIDENCE OF THIS PERMIT MAY BE REQUIRED PRIOR TO PLAN APPROVAL BY GDC-WWS. MORE THAN 5 ACRES WILL BE DISTURBED IN CONSTRUCTION OF THIS PROJECT, THEREFORE A NPDES STORM WATER DISCHARGE PERMIT WILL BE REQUIRED.
- E. LIVINGSTON COUNTY PERMIT TO CONSTRUCT A PUBLIC UTILITY:** AFTER THE APPROVAL OF THIS PRELIMINARY PLAT OR SITE PLAN, THE DEVELOPER SHALL SUBMIT A DETAILED PLAN FOR CONSTRUCTION OF ALL PUBLIC SANITARY SEWER. THE PLANS MUST HAVE TYRONE TOWNSHIP OR LDC APPROVAL, A S-PERMIT ISSUED, AND APPROVAL FROM THE EGLE PRIOR TO BEGINNING CONSTRUCTION.
- F. LIVINGSTON COUNTY ROAD COMMISSION RIGHT-OF-WAY PERMIT:** THE DEVELOPER SHALL OBTAIN A PERMIT FROM THE LIVINGSTON COUNTY ROAD COMMISSION TO PERFORM WORK WITHIN THE TOWNSHIP ROAD PUBLIC RIGHT-OF-WAY. ALL FEES FOR THE PERMIT, BONDS AND INSURANCES ARE THE RESPONSIBILITY OF THE DEVELOPER.
- G. MUNICIPALITY SANITARY SEWER PERMIT:** PRIOR TO THE ISSUANCE OF A ZONING PERMIT BY THE LOCAL MUNICIPALITY, THE DEVELOPER SHALL BE REQUIRED TO OBTAIN A SANITARY SEWER TAP-IN PERMIT FROM THE LOCAL MUNICIPALITY, IF AUTHORIZED.
- H. STATE CONSTRUCTION PERMITS:** THE SANITARY SEWER CONSTRUCTION PERMITS FROM THE MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY SHALL BE SUBMITTED TO THE EGLE AFTER APPROVAL OF TYRONE TOWNSHIP OR LDC. CONSTRUCTION SHALL NOT BEGIN UNTIL THESE STATE PERMITS ARE ISSUED.

UTILITY STATEMENT

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS THE SURVEYOR AND/OR ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR AND/OR ENGINEER FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR AND/OR ENGINEER HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

SHEET INDEX

TITLE	SHEET NO.
COVER, NOTE & DETAIL SHEET	P-1
PRELIMINARY SITE CONDOMINIUM PLAN	P-2
SURVEY OF EXISTING CONDITIONS	P-3
PRELIMINARY SITE UTILITY PLAN	P-4
PRELIMINARY SITE OPEN SPACE PLAN	P-5
PRELIMINARY SITE LANDSCAPING PLAN	P-6
PRELIMINARY LIMITS OF CONSTRUCTION PLAN	P-7
PRELIMINARY FIRE TRUCK ROUTE PLAN	P-8
PRELIMINARY SOILS INFORMATION PLAN	P-9
PARALLEL SITE PLAN	P-10

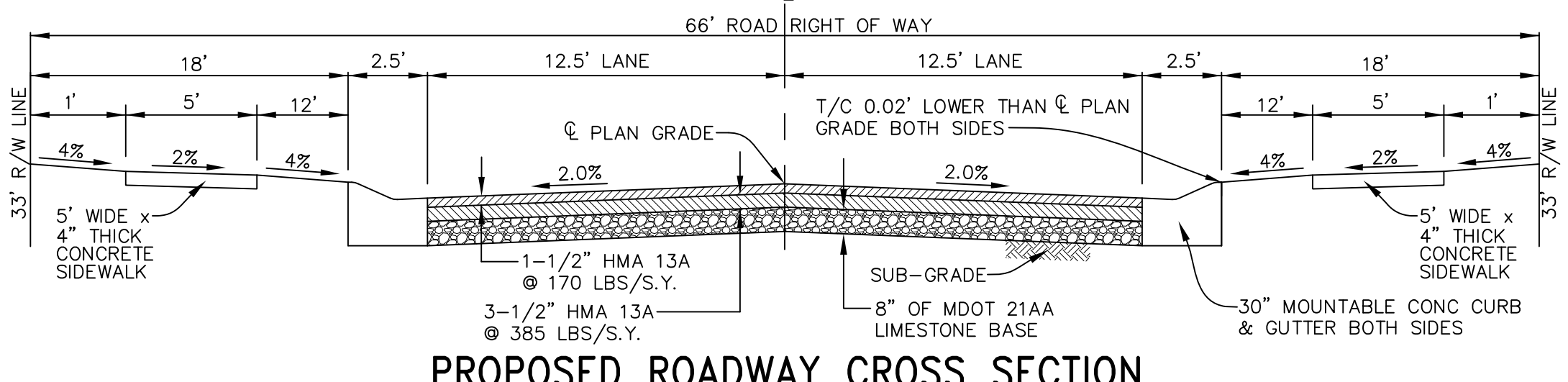


SANITARY SEWER & WATER WELL NOTES:

1. ALL PUBLIC SANITARY SEWERS SHALL BE LOCATED WITHIN PUBLIC ROAD RIGHT-OF-WAY OR SHALL HAVE AN EASEMENT GRANTED TO THE AGENCY AND/OR MUNICIPALITY FOR MAINTENANCE, REPAIR AND/OR REPLACEMENT. THE EASEMENTS WILL BE SHOWN ON THE FINAL PUD CONDOMINIUM DOCUMENTS.
2. ALL SANITARY SEWERS 8" OR LARGER PROPOSED FOR THIS PROJECT SHALL BE DESIGNED FOR AND BECOME A PUBLIC SYSTEM. PROPOSED 8" SANITARY SHALL BE SDR 26 PVC PIPE.
3. SANITARY SEWER SADDLE TAPS, WHEN NECESSARY, SHALL BE MADE BY LIVINGSTON COUNTY DRAIN COMMISSIONER AND/OR TYRONE TOWNSHIP UTILITIES DEPARTMENT. THE DEVELOPER SHALL OBTAIN THE REQUIRED MUNICIPALITY SANITARY SEWER PERMIT AND PAY THE REQUIRED FEE FOR A SADDLE TAP.
4. SANITARY SEWER SERVICE LEAD FROM THE PUBLIC MAIN LINE TO EACH LOT SHALL BE A 6" SDR 26 P.V.C. THERE SHALL BE A LEAD FOR EACH LOT. ALL SERVICE LEADS SHALL BE CONNECTED TO THE MAINLINE SEWER AND NOT AT A MANHOLE.
5. MAIN LINE SANITARY SEWER SHALL BE SIZED TO ACCOMMODATE ALL FLOWS. THE MINIMUM SIZE SHALL BE 8" WITH MANHOLES AT BENDS OR 400' SPACING.
6. ALL UNITS/LOTS SHALL HAVE INDIVIDUAL RESIDENTIAL WATER WELLS. ALL REQUIREMENTS TO INSTALL A WELL SHALL MEET LIVINGSTON COUNTY HEALTH DEPARTMENT STANDARDS AND REGULATIONS. THE APPLICATION WILL BE PICKED UP FROM THEIR OFFICE.
7. THIS PROJECT HAS BEEN DESIGNED USING THE LATEST LIVINGSTON COUNTY DRAIN COMMISSIONER AND/OR TYRONE TOWNSHIP CRITERIA. REVIEW THE NOTES, DETAILS AND DESIGN CAREFULLY BEFORE SUBMITTING A BID. FULL COMPLIANCE WITH THE NEW STANDARDS WILL BE REQUIRED.

SITE SPECIFIC NOTES:

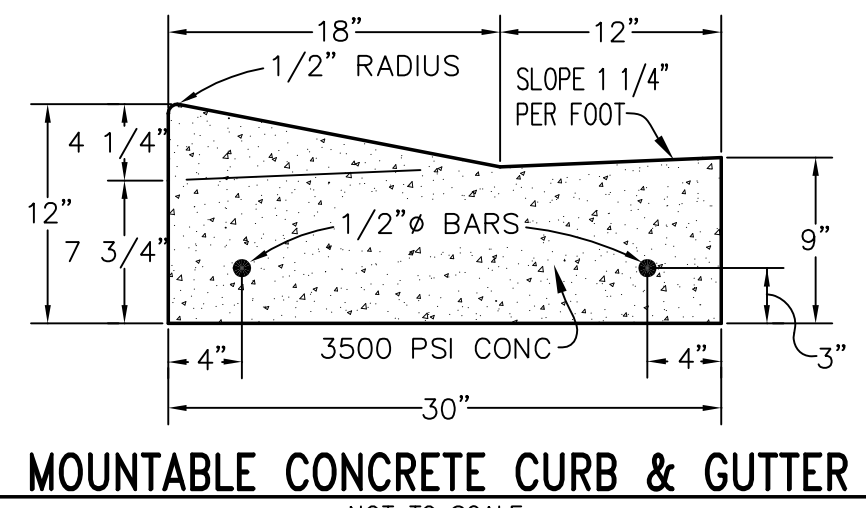
1. ALL ROADS WILL BECOME PUBLIC ROADS BUILT TO MEET THE LIVINGSTON COUNTY ROAD COMMISSION STANDARDS AND SPECIFICATIONS, AND WILL BE DEDICATED TO THE ROAD COMMISSION UPON FINAL APPROVALS.
2. ALL DETENTION BASINS WILL BE DESIGNED AND BUILT PER THE LIVINGSTON COUNTY DRAIN COMMISSION (LDC), AND WILL BE PARTIALLY PRIVATE & PUBLIC SYSTEMS UPON FINAL APPROVALS.
3. ROADWAY SIDEWALKS ARE PROPOSED PER TYRONE TOWNSHIP PLANNING REQUEST, AND SHALL BE A MINIMUM OF 5 FEET WIDE, 1 FOOT INSIDE THE ROAD RIGHT-OF-WAY FOR THE ENTIRE PROJECT. (SEE DETAIL SHEET C-2 & C-4). ALL OTHER WALKWAYS/NATURE TRAILS ARE FOR THE USE OF THE PROPOSED DEVELOPMENT, AND SHALL BE MINIMUM 5' WIDE AND BE CONSTRUCTED OF EITHER COMPACTED LIMESTONE, ASPHALT, CONCRETE, OR WOOD CHIPS, AS PER THE REQUIREMENTS OF THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES & ENERGY (EGLE).
4. THE PLANNED UNIT DEVELOPMENT AND SPECIAL LAND USE REVIEW AND APPROVAL IS A TWO STEP PROCESS, FIRST PRELIMINARY APPROVALS, THEN FINAL SITE PLAN APPROVAL, BEFORE ANY PERMITS ARE ISSUED FOR THE PROJECT.
5. THE PLANNED UNIT DEVELOPMENT WILL CONSIST OF TWO DIFFERENT PHASES OF DEVELOPMENT. UPON APPROVAL OF THIS PRELIMINARY PLANNED UNIT DEVELOPMENT, CONSTRUCTION DRAWINGS WILL BE SUBMITTED SEPARATELY FOR EACH PHASE OF CONSTRUCTION.



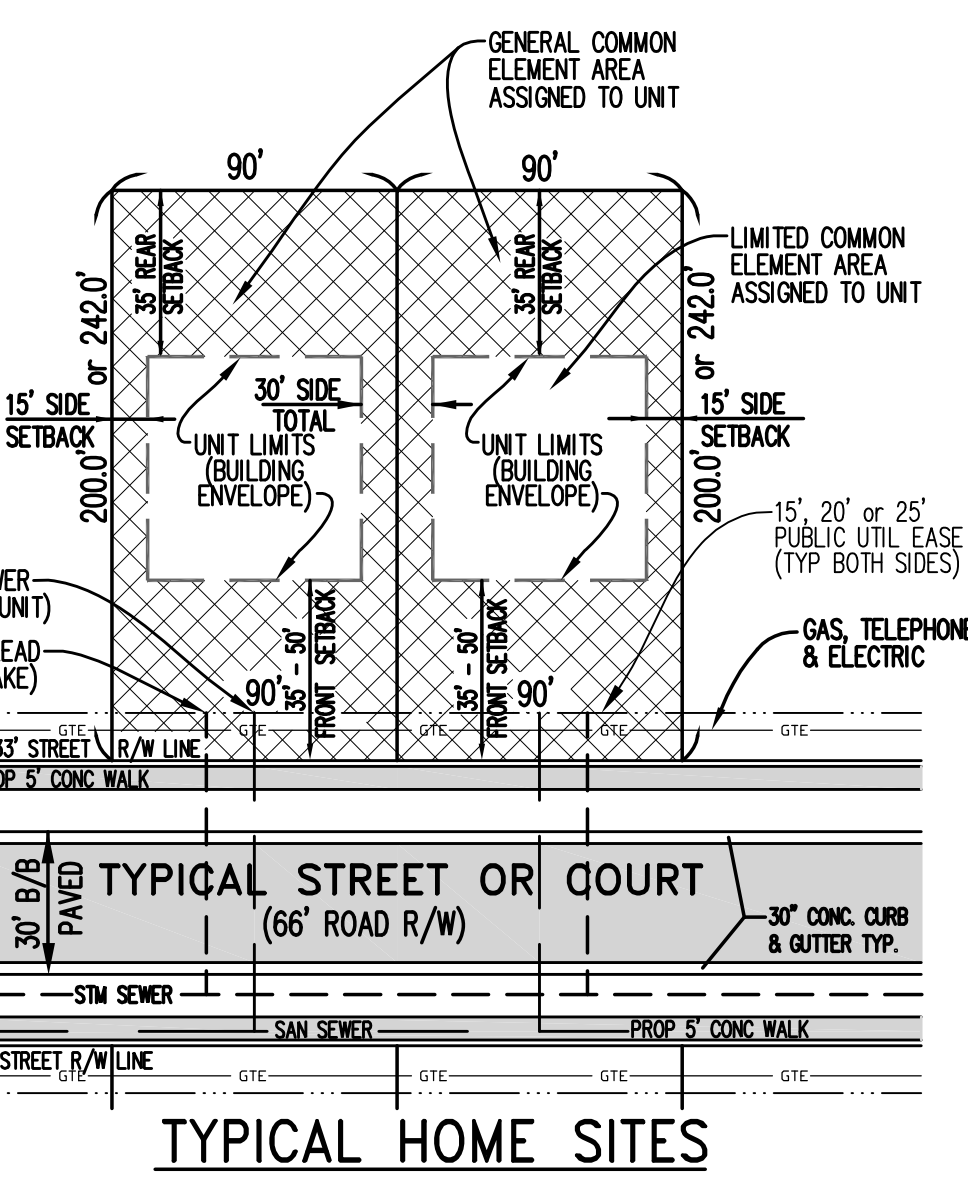
PROPOSED ROADWAY CROSS SECTION

ALTERNATE PAVEMENT X-SECTION

- 2" HMA 13A WEARING COURSE @ 220 LBS/S.Y.
- 2" HMA 13A LEVELING COURSE @ 220 LBS/S.Y.
- 4" HMA 13A BASE COURSE @ 440 LBS/S.Y. (2 LIFTS)



MOUNTABLE CONCRETE CURB & GUTTER
NOT TO SCALE



TYPICAL HOME SITES

SITE REQUIREMENTS

LIVINGSTON COUNTY ROAD COMMISSION - PUBLIC ROADS
LIVINGSTON COUNTY - PUBLIC SANITARY SEWER
LIVINGSTON COUNTY - PRIVATE & PUBLIC STORM SEWER
LIVINGSTON COUNTY - PRIVATE & PUBLIC DETENTION BASINS
LIVINGSTON COUNTY - PRIVATE WATER WELLS
CONSUMERS ENERGY - BURIED GAS & ELECTRIC
AT&T COMMUNICATIONS - BURIED TELEPHONE
CHARTER COMMUNICATIONS - BURIED CABLE TELEVISION

SITE DATA:

TOTAL GROSS SITE AREA = 158.71 ACRES (TOTAL PROPERTY)
TOTAL P.U.D. SITE AREA = 156.54 ACRES (EXC ROAD R/W)
NATURE PRESERVE OPEN SPACE AREA = 89.73 TRUE ACRES (EXC ROAD)
USABLE NATURE PRESERVE OPEN SPACE AREA = 88.92 ACRES (EXC ROAD)
PHASE 1 (WEST SIDE) = 53.81 NET ACRES OF LAND
NET USABLE LAND = 53.81-22.03 = 31.78 NET ACRES
PUBLIC ROADWAY AREA = 6.81 ACRES
RESIDENTIAL LAND LOT/UNIT AREA = 24.97 ACRES
PHASE 2 (EAST SIDE) = 102.73 NET ACRES OF LAND
NET USABLE LAND = 102.73-67.60 = 35.13 NET ACRES
PUBLIC ROADWAY AREA = 5.81 ACRES
RESIDENTIAL LAND LOT/UNIT AREA = 29.32 ACRES
EXISTING SITE ZONING = RE - RURAL ESTATES (SEE CHART LEFT)
PROPOSED SITE USE = PLANNED UNIT DEVELOPMENT (PUD)
PROPOSED TOTAL NUMBER OF UNITS = 88 UNITS
PHASE 1 (WEST SIDE) = 42 UNITS, NUMBERED 1 - 42
PHASE 2 (EAST SIDE) = 46 UNITS, NUMBERED 43 - 88

P.U.D. DEVELOPMENT STANDARDS:

MINIMUM LOT AREA = 21,780 SFT OR 0.50 ACRES (PHASE 1)
MINIMUM LOT AREA = 18,000 SFT OR 0.41 ACRES (PHASE 2)
MINIMUM LOT WIDTH = 90 FEET (WITH SEWER)
SETBACKS REQUIREMENTS:
FRONT = 35 FEET (MIN) TO 50 FEET (MAX)
SIDE = 15 FEET (TOTAL TWO SIDES = 30 FEET)
REAR = 35 FEET (MIN)
OPEN WATER SETBACK = 50 FEET (MIN)
MAXIMUM LOT COVERAGE = 35%
MAXIMUM BUILDING HEIGHT = 30 FEET
MINIMUM BUILDING SQUARE FOOTAGE = 1,600 SFT

PHASING SCHEDULE & TIMELINE:

BEGIN PHASE 1 (WEST SIDE) 42 UNITS (SPRING 2022)
- ALL GRADING/EARTHWORK ROUGH & UNDERGROUND UTILITIES INSTALLED
PHASE 1(A) = UNITS 1-13 & 36-42, 20 UNITS (SPRING 2022)
PHASE 1(B) = UNITS 14-35, 22 UNITS (SPRING 2023)
BEGIN PHASE 2 (EAST SIDE) 46 UNITS (SPRING 2024)
- ALL GRADING/EARTHWORK ROUGH & UNDERGROUND UTILITIES INSTALLED
PHASE 2(A) = UNITS 43-59, 17 UNITS (SPRING 2024)
PHASE 2(B) = UNITS 60-67 & 85-88, 12 UNITS (SPRING 2026)
PHASE 2(C) = UNITS 68-84, 17 UNITS (SPRING 2027)

SANITARY SEWER BASIS OF DESIGN

88 UNITS/LOTS * 3.5 PEOPLE PER LOT = 308 PEOPLE
308 PEOPLE * 100 GPD (PER PERSON) = 30,800 GPD
30,800 GPD = (30,800/24 HOURS/60 MINUTES) = 21.39 GPM
THE EXISTING 12" SANITARY SEWER OUTLET (EX SLOPE = 0.22%) AND CARRY A FLOW OF 2.13 CFS OR 956 GPM.

DENSITY CALCULATION

TOTAL SITE AREA = 158.71 ACRES
PROPOSED TOTAL NO. OF UNITS = 88 UNITS
DENSITY = 88/158.7 = 0.55 UNITS PER ACRE

PRELIMINARY REVIEW

REVISIONS	DRN. BY:	J.R.B.	05.27.2021	SHEET NO.:
08.04.2021	DSN BY:	J.R.B.	"	P-1
10.06.2021	CHK'D BY:	J.P.W.	"	
10.25.2021	APPR BY:	J.B.M.	"	



FILE: JOBS: 2020/20-290-WL/DWG/20-290 COVER SHEET.DWG - P-1

SCALE: NONE
JOB NO. 20-290

OWNER/DEVELOPER:
LAKE URBAN DEV, LLC
C/O WILSON & LINO
8273 S SAGINAW ST, GRAND BLANC, MI 48439
CONTACT: 810.244.6302

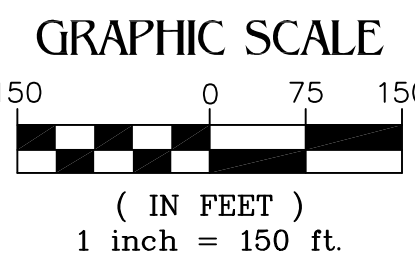
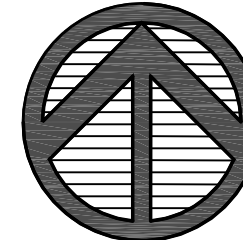
PART OF SECTIONS 3 & 10
TYRONE TOWNSHIP, T4N-R6E
LIVINGSTON COUNTY, MICHIGAN

F&E Fenton Land Surveying & Engineering, Inc
14165 N. FENTON ROAD, SUITE 101A, FENTON, MI 48430
PHONE: 810.354.8115 EMAIL: INFO@FENTONLSE.COM

PRELIMINARY COVER SHEET FOR:
LAKE URBAN CROSSINGS P.U.D.
PART OF SECTIONS 3 & 10, T4N-R6E,
TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

PRELIMINARY OVERALL SITE PLAN LAYOUT LAKE URBAN CROSSINGS P.U.D.

NORTH



INDIVIDUAL UNIT INFORMATION TABLE

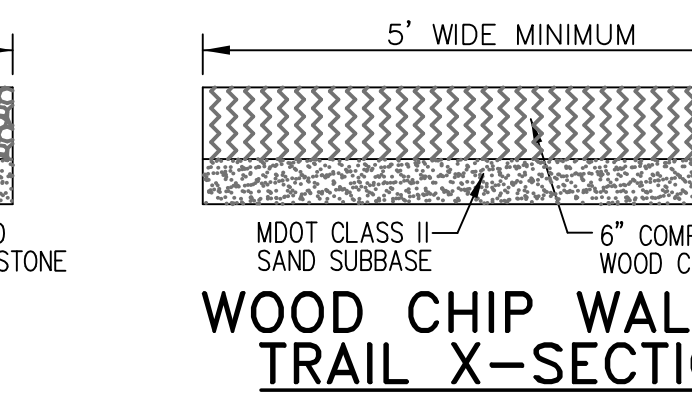
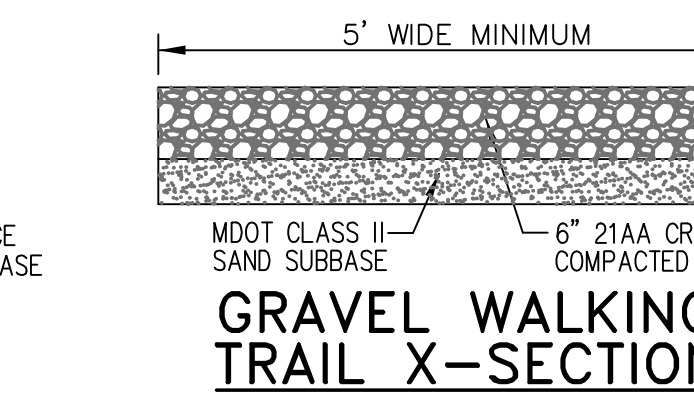
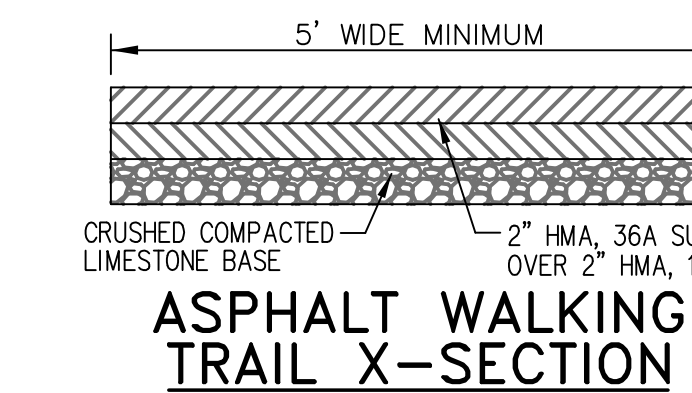
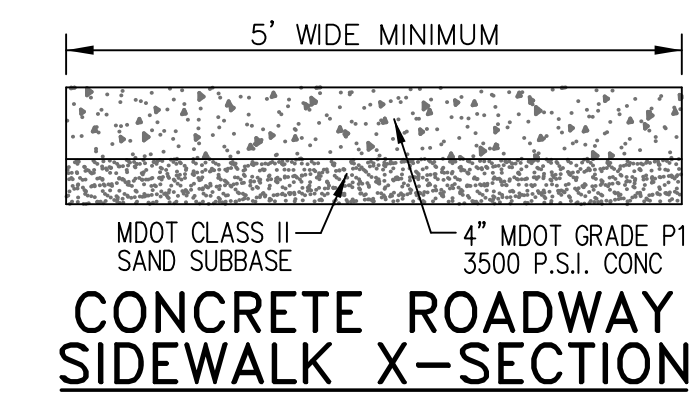
UNIT NUMBER	TOTAL UNIT AREA (SFT)	TOTAL UNIT AREA (ACRES)	BUILDING ENVELOPE (SFT)	FRONT SETBACK (FEET)	REAR SETBACK (FEET)	FRONT LOT WIDTH AT SETBACK (FEET)	FRONT LOT DEPTH AT SETBACK (FEET)
1	40,777	0.936	17,031	40.0	252.5	50.0	129.0
2	31,535	0.724	10,849	50.0	117.2	50.0	117.2
3	23,726	0.545	10,240	50.0	90.0	50.0	90.0
4	30,188	0.693	14,615	50.0	103.0	50.0	90.0
5	26,272	0.603	10,244	50.0	90.0	50.0	90.0
6	22,516	0.517	9,330	50.0	990.0	50.0	90.0
7	27,432	0.630	13,071	50.0	90.0	50.0	90.0
8	21,912	0.503	8,613	50.0	106.3	50.0	90.0
9	23,533	0.540	7,021	40.0	195.0	50.0	99.3
10	26,160	0.601	12,345	50.0	90.0	50.0	107.2
11	27,380	0.628	13,061	50.0	107.2	50.0	126.5
12	27,230	0.625	11,562	50.0	126.5	50.0	100.5
13	27,319	0.627	9,919	50.0	100.5	50.0	90.0
14	23,975	0.550	10,385	50.0	90.0	50.0	90.0
15	23,287	0.535	9,473	50.0	90.0	50.0	90.0
16	22,526	0.517	9,973	50.0	90.0	50.0	101.6
17	40,616	0.932	17,708	50.0	101.6	50.0	90.0
18	27,813	0.638	7,296	50.0	90.0	50.0	90.0
19	26,652	0.611	11,076	50.0	90.0	50.0	90.0
20	25,015	0.574	10,645	50.0	90.0	50.0	90.0
21	23,045	0.529	6,792	50.0	90.0	50.0	90.0
22	21,987	0.505	5,346	50.0	90.0	50.0	90.0
23	21,782	0.500	6,674	50.0	106.6	50.0	90.0
24	21,785	0.500	6,951	50.0	112.5	50.0	110.4
25	21,792	0.500	6,652	50.0	110.4	50.0	111.4
26	22,284	0.512	5,829	50.0	111.4	50.0	116.5
27	35,638	0.841	10,901	40.0	139.6	50.0	167.9
28	31,974	0.734	8,633	40.0	254.0	50.0	144.3
29	26,247	0.603	9,385	40.0	163.1	50.0	167.4
30	23,178	0.532	8,569	50.0	100.0	50.0	100.0
31	30,875	0.709	14,265	50.0	167.4	50.0	100.0
32	22,254	0.511	6,296	50.0	100.0	50.0	100.0
33	23,485	0.539	8,536	50.0	100.0	50.0	100.0
34	21,788	0.500	8,330	50.0	111.9	50.0	100.0
35	21,841	0.501	5,241	50.0	140.0	50.0	139.6
36	22,592	0.519	6,859	40.0	139.6	50.0	167.9
37	23,990	0.551	7,909	50.0	167.9	50.0	111.9
38	22,105	0.507	9,079	50.0	111.9	50.0	139.6
39	26,122	0.600	10,367	50.0	139.6	50.0	131.5
40	25,130	0.577	9,952	50.0	131.5	50.0	122.0
41	23,562	0.541	7,975	50.0	122.0	50.0	234.2
42	27,499	0.631	9,278	40.0			

INDIVIDUAL UNIT INFORMATION TABLE

UNIT NUMBER	TOTAL UNIT AREA (SFT)	TOTAL UNIT AREA (ACRES)	BUILDING ENVELOPE (SFT)	FRONT SETBACK (FEET)	REAR SETBACK (FEET)	FRONT LOT WIDTH AT SETBACK (FEET)	FRONT LOT DEPTH AT SETBACK (FEET)
43	56,816	1.304	12,507	50.0	197.4	50.0	100.0
44	24,195	0.555	10,988	50.0	100.0	50.0	99.0
45	23,588	0.542	10,564	50.0	99.0	50.0	110.0
46	24,802	0.569	11,404	50.0	115.6	50.0	124.8
47	24,195	0.555	10,988	50.0	100.0	50.0	140.6
48	23,849	0.547	10,188	50.0	100.0	50.0	149.1
49	24,853	0.571	7,433	50.0	110.0	50.0	116.0
50	21,834	0.501	7,570	35.0	115.6	50.0	106.0
51	21,888	0.502	7,625	35.0	124.8	50.0	106.0
52	22,885	0.525	7,316	35.0	140.6	50.0	149.1
53	22,313	0.512	7,891	35.0	149.1	50.0	116.0
54	18,128	0.416	6,947	35.0	116.0	50.0	106.0
55	25,578	0.587	8,270	50.0	116.0	50.0	106.0
56	23,100	0.530	10,125	50.0	106.0	50.0	116.3
57	23,100	0.530	10,125	50.0	106.0	50.0	116.3
58	25,578	0.587	8,270	50.0	116.3	50.0	101.4
59	31,500	0.723	9,300	50.0	216.0	50.0	124.1
60	37,076	0.851	9,282	50.0	244.1	50.0	116.3
61	23,678	0.567	8,970	50.0	116.3	50.0	101.4
62	23,100	0.530	10,125	50.0	106.0	50.0	116.3
63	23,100	0.530	10,125	50.0	106.0	50.0	116.3
64	25,578	0.587	8,270	50.0	116.3	50.0	101.4
65	18,950	0.435	8,134	35.0	106.0	50.0	128.6
66	18,484	0.424	8,051	35.0	101.4	50.0	128.6
67	18,287	0.420	7,983	35.0	124.1	50.0	131.8
68	19,514	0.448	8,773	35.0	128.2	50.0	141.0
69	18,490	0.424	7,924	35.0	106.0	50.0	139.7
70	18,754	0.431	7,897	35.0	110.6	50.0	145.4
71	18,080	0.415	5,595	35.0	128.6	50.0	131.8
72	18,036	0.414	6,796	35.0	131.8	50.0	141.0
73	18,024	0.414	6,890	35.0	131.8	50.0	145.4
74	18,025	0.414	6,941	35.0	131.8	50.0	139.7
75	42,757	0.982	18,551	35.0	121.7	50.0	168.2
76	21,069	0.484	6,717	35.0	139.6	50.0	153.8
77	18,093	0.415	6,074	35.0	141.0	50.0	153.8
78	25,233	0.579	9,787	35.0	139.7	50.0	131.5
79	41,547	0.954	18,190	35.0	122.8	50.0	113.4
80	26,617	0.611	9,795	35.0	168.2	50.0	113.4
81	20,360	0.467	6,411	35.0	145.4	50.0	113.4
82	29,613	0.680	15,647	35.0	113.4	50.0	113.4
83	25,125	0.577	12,068	35.0	113.4	50.0	113.4
84	25,319	0.604	12,026	35.0	113.4	50.0	153.8
85	26,156	0.600	9,833	35.0	153.8	50.0	220.6
86	30,005	0.689	10,916	35.0	328.5	50.0	317.3
87	70,434	1.617	38,506	50.0			
88	117,223	2.691	81,787	50.0			

LEGEND

- EX OPEN WATER AREAS
- EX WETLAND AREAS
- EX EDGE OF WETLAND AREA
- EX ZONING DISTRICT LIMITS
- PROP PERMANENT OPEN SPACE AREAS
- PROP FINAL EDGE OF WETLAND AREA
- PROP UNIT/LOT NUMBER
- PROP CENTERLINE OF FLOW
- PROP BASIN AND/OR CONTOUR
- PROP EASEMENT LINE
- PROP TRAFFIC FLOW ARROWS
- PROP LIGHT POLE LOCATION
- PROP ROADWAY CONCRETE SIDEWALKS
- PROP ASPHALT WALKING TRAIL
- PROP GRAVEL OR WOOD CHIP WALKING TRAIL



SITE SPECIFIC NOTES:

- ALL ROADS WILL BECOME PUBLIC ROADS BUILT TO MEET THE LIVINGSTON COUNTY ROAD COMMISSION STANDARDS AND SPECIFICATIONS, AND WILL BE DEDICATED TO THE ROAD COMMISSION UPON FINAL APPROVALS.
- ALL DETENTION BASINS WILL BE DESIGNED AND BUILT PER THE LIVINGSTON COUNTY DRAIN COMMISSION (LDC), AND WILL BE PARTIALLY PRIVATE & PUBLIC SYSTEMS UPON FINAL APPROVALS.
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- THE PLANNED UNIT DEVELOPMENT WILL CONSIST OF TWO DIFFERENT PHASES OF DEVELOPMENT. UPON APPROVAL OF THIS PRELIMINARY PLANNED UNIT DEVELOPMENT, CONSTRUCTION DRAWINGS WILL BE SUBMITTED SEPARATELY FOR EACH PHASE OF CONSTRUCTION.

P.U.D. DEVELOPMENT STANDARDS:

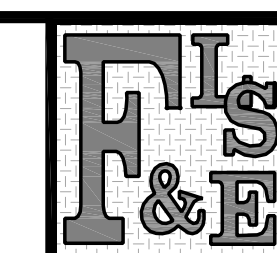
- MINIMUM LOT AREA = 21,780 SFT OR 0.50 ACRES (PHASE 1)
- MINIMUM LOT AREA = 18,000 SFT OR 0.41 ACRES (PHASE 2)
- MINIMUM LOT WIDTH = 90 FEET (WITH SEWER)
- SETBACKS REQUIREMENTS:
 - FRONT = 35 FEET (MIN) TO 50 FEET (MAX)
 - SIDE = 15 FEET (TOTAL TWO SIDES = 30 FEET)
 - REAR = 35 FEET (MIN)
 - OPEN WATER SETBACK = 50 FEET (MIN)
 - MAXIMUM LOT COVERAGE = 35%
 - MAXIMUM BUILDING HEIGHT = 30 FEET
 - MINIMUM BUILDING SQUARE FOOTAGE = 1,600 SFT (SEE INDIVIDUAL UNIT INFORMATION TABLE, LEFT)

FILED: 2020-09-29 09:29 AM / DWG/20-290 SITE PLAN LAYOUT.DWG - P-2

SCALE: 1"=150'
JOB NO. 20-290

OWNER/DEVELOPER:
LAKE URBAN DEV, LLC
C/O WILSON & LINO
8273 S SAGINAW ST, GRAND BLANC, MI 48439
CONTACT: 810.244.6302

PART OF SECTIONS 3 & 10
TYRONE TOWNSHIP, T4N-R6E
LIVINGSTON COUNTY, MICHIGAN

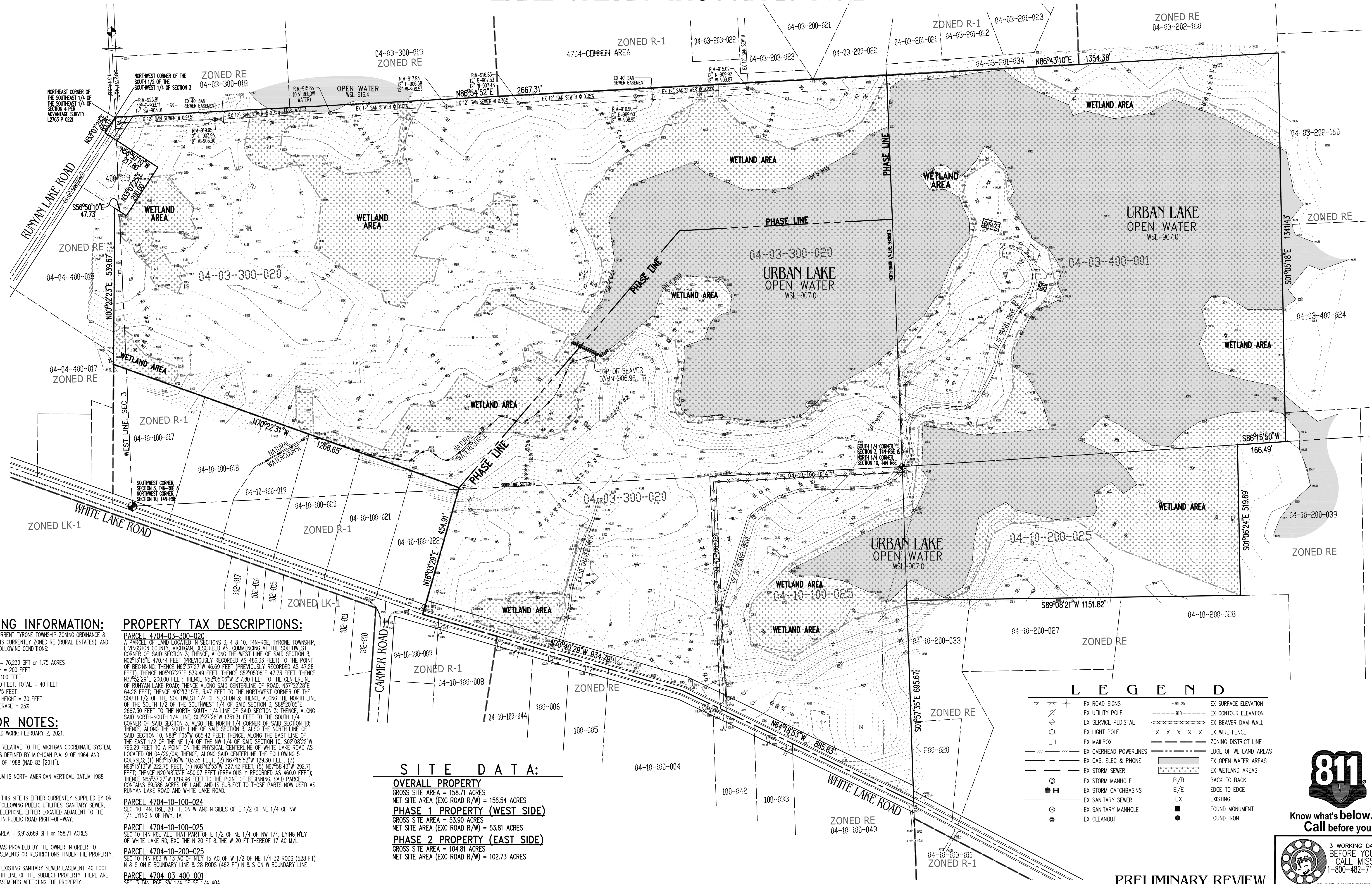


Fenton Land Surveying & Engineering, Inc
14165 N. FENTON ROAD, SUITE 101A, FENTON, MI 48430
PHONE: 810.354.8115 EMAIL: INFO@FENTONLSE.COM

PRELIMINARY OVERALL SITE PLAN LAYOUT FOR:
LAKE URBAN CROSSINGS P.U.D. CONDOMINIUM
PART OF SECTIONS 3 & 10, T4N-R6E,
TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

REVISIONS	DRN. BY:	J.R.B.	05.27.2021	SHEET NO:
08.09.2021	DSN BY:	J.R.B.	"	P-2
10.06.2021	CHK'D BY:	J.P.W.	"	
10.25.2021	APPR BY:	J.B.M.	"	

SURVEY OF EXISTING CONDITIONS LAKE URBAN CROSSINGS P.U.D.



EX ZONING INFORMATION:

ACCORDING TO THE CURRENT TYRONE TOWNSHIP ZONING ORDINANCE & MAP, THIS PROPERTY IS CURRENTLY ZONED RE (RURAL ESTATES), AND IS SUBJECT TO THE FOLLOWING CONDITIONS:

- 1) MINIMUM LOT SIZE = 76,230 SFT or 1.75 ACRES
- 2) MINIMUM LOT WIDTH = 200 FEET
- 3) FRONT SETBACK = 100 FEET
- 4) SIDE SETBACK = 20 FEET, TOTAL = 40 FEET
- 5) REAR SETBACK = 75 FEET
- 6) MAXIMUM BUILDING HEIGHT = 30 FEET
- 7) MAXIMUM LOT COVERAGE = 25%

SURVEYOR NOTES:

1. DATE OF LAST FIELD WORK: FEBRUARY 2, 2021.
2. THE BEARINGS ARE RELATIVE TO THE MICHIGAN COORDINATE SYSTEM, SOUTH ZONE (2113) AS DEFINED BY MICHIGAN P.A. 9 OF 1964 AND AMENDED BY P.A. 154 OF 1988 (NAD 83 [2011]).
3. THE VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
4. PER OBSERVATION, THIS SITE IS EITHER CURRENTLY SUPPLIED BY OR HAS ACCESS TO THE FOLLOWING PUBLIC UTILITIES: SANITARY SEWER, GAS, ELECTRIC, AND TELEPHONE. EITHER LOCATED ADJACENT TO THE SUBJECT SITE OR WITHIN PUBLIC ROAD RIGHT-OF-WAY.
5. TOTAL PROPERTY AREA = 6,913,689 SFT or 158.71 ACRES
6. NO TITLE POLICY WAS PROVIDED BY THE OWNER IN ORDER TO DETERMINE IF ANY EASEMENTS OR RESTRICTIONS HINDER THE PROPERTY.
7. THERE IS ONLY AN EXISTING SANITARY SEWER EASEMENT, 40 FOOT WIDE, ALONG THE NORTH LINE OF THE SUBJECT PROPERTY. THERE ARE NO OTHER EXISTING EASEMENTS AFFECTING THE PROPERTY.

PROPERTY TAX DESCRIPTIONS:

PARCEL 4704-03-300-020
A PARCEL OF LAND LOCATED IN SECTIONS 3, 4 & 10, T4N-R6E, TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 3; THENCE ALONG THE WEST LINE OF SAID SECTION 3, N02°13'15"E 470.44 FEET (PREVIOUSLY RECORDED AS 486.33 FEET) TO THE POINT OF BEGINNING; THENCE N65°37'27"W 46.69 FEET (PREVIOUSLY RECORDED AS 47.28 FEET); THENCE N05°07'27"E 530.49 FEET; THENCE S02°05'06"E 47.73 FEET; THENCE N37°52'29"E 200.00 FEET; THENCE N02°05'06"W 217.80 FEET TO THE CENTERLINE OF RUNYAN LAKE ROAD; THENCE ALONG SAID CENTERLINE OF ROAD, N37°52'28"E 64.28 FEET; THENCE N02°13'15"E, 3.47 FEET TO THE NORTHWEST CORNER OF THE SOUTH 1/2 OF THE SOUTHWEST 1/4 OF SECTION 3; THENCE ALONG THE NORTH LINE OF THE SOUTH 1/2 OF THE SOUTHWEST 1/4 OF SAID SECTION 3, S88°20'03"E 2667.30 FEET TO THE NORTH-SOUTH 1/4 LINE OF SAID SECTION 3; THENCE, ALONG SAID NORTH-SOUTH 1/4 LINE, S02°27'26"W 1351.31 FEET TO THE SOUTH 1/4 CORNER OF SAID SECTION 3, ALSO THE NORTH 1/4 CORNER OF SAID SECTION 10; THENCE, ALONG THE SOUTH LINE OF SAID SECTION 3, ALSO THE NORTH LINE OF SAID SECTION 10, N89°11'05"W 668.42 FEET; THENCE, ALONG THE EAST LINE OF THE EAST 1/2 OF THE NE 1/4 OF THE NW 1/4 OF SAID SECTION 10, S02°08'22"W 796.29 FEET TO A POINT ON THE PHYSICAL CENTERLINE OF WHITE LAKE ROAD AS LOCATED ON 04/29/04; THENCE, ALONG SAID CENTERLINE OF THE FOLLOWING S COURSES: (1) N63°50'06"W 103.35 FEET, (2) N67°15'52"W 129.30 FEET, (3) N69°15'13"W 222.75 FEET, (4) N68°42'53"W 327.42 FEET, (5) N67°58'43"W 292.71 FEET; THENCE N20°48'33"E 450.97 FEET (PREVIOUSLY RECORDED AS 460.0 FEET); THENCE N65°37'27"W 1219.96 FEET TO THE POINT OF BEGINNING. SAID PARCEL CONTAINS 80.586 ACRES OF LAND AND IS SUBJECT TO THOSE PARTS NOW USED AS RUNYAN LAKE ROAD AND WHITE LAKE ROAD.

PARCEL 4704-10-100-024
SEC. 10 T4N-R6E, 20 FT. ON W AND N SIDES OF E 1/2 OF NE 1/4 OF NW 1/4 LYING N OF HWY. 1A

PARCEL 4704-10-100-025
SEC. 10 T4N-R6E, ALL THAT PART OF E 1/2 OF NE 1/4 OF NW 1/4 LYING NLY OF WHITE LAKE RD, EXC. THE N 20 FT & THE W 20 FT THEREOF 17 AC W/L

PARCEL 4704-10-200-025
SEC. 10 T4N-R6E, W 1/2 OF NE 1/4 OF NW 1/4 AC OF W 1/2 OF NE 1/4 32 RODS (528 FT) N & S ON E BOUNDARY LINE & 28 RODS (462 FT) N & S ON W BOUNDARY LINE

PARCEL 4704-03-400-001
SEC. 3 T4N-R6E, SW 1/4 OF SE 1/4 40A

SITE DATA:

OVERALL PROPERTY
GROSS SITE AREA = 158.71 ACRES
NET SITE AREA (EXC ROAD R/W) = 156.54 ACRES

PHASE 1 PROPERTY (WEST SIDE)
GROSS SITE AREA = 53.90 ACRES
NET SITE AREA (EXC ROAD R/W) = 53.81 ACRES

PHASE 2 PROPERTY (EAST SIDE)
GROSS SITE AREA = 104.81 ACRES
NET SITE AREA (EXC ROAD R/W) = 102.73 ACRES

LEGEND

	EX ROAD SIGNS		EX SURFACE ELEVATION
	EX UTILITY POLE		EX CONTOUR ELEVATION
	EX SERVICE PEDISTAL		EX BEAVER DAM WALL
	EX LIGHT POLE		EX WIRE FENCE
	EX MAILBOX		ZONING DISTRICT LINE
	EX OVERHEAD POWERLINES		EDGE OF WETLAND AREAS
	EX GAS, ELEC & PHONE		EX OPEN WATER AREAS
	EX STORM SEWER		EX WETLAND AREAS
	EX STORM MANHOLE		BACK TO BACK
	EX STORM CATCHBASINS		EDGE TO EDGE
	EX SANITARY SEWER		EXISTING
	EX SANITARY MANHOLE		FOUND MONUMENT
	EX CLEANOUT		FOUND IRON



Know what's below.
Call before you dig.

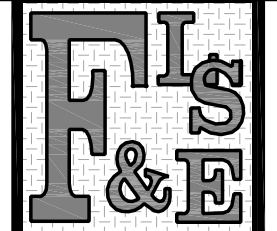


PRELIMINARY REVIEW

SCALE: 1"=150'
JOB NO. 20-290

OWNER/DEVELOPER:
LAKE URBAN DEV, LLC
C/O WILSON & LINO
8273 S SAGINAW ST, GRAND BLANC, MI 48439
CONTACT: 810.244.6302

PART OF SECTIONS 3 & 10
TYRONE TOWNSHIP, T4N-R6E
LIVINGSTON COUNTY, MICHIGAN



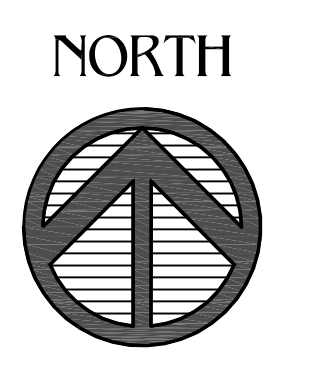
Fenton Land Surveying & Engineering, Inc
14165 N. FENTON ROAD, SUITE 101A, FENTON, MI 48430
PHONE: 810.354.8115 EMAIL: INFO@FENTONLSE.COM

SURVEY OF EXISTING CONDITIONS FOR:
LAKE URBAN CROSSINGS P.U.D.
PART OF SECTIONS 3 & 10, T4N-R6E,
TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

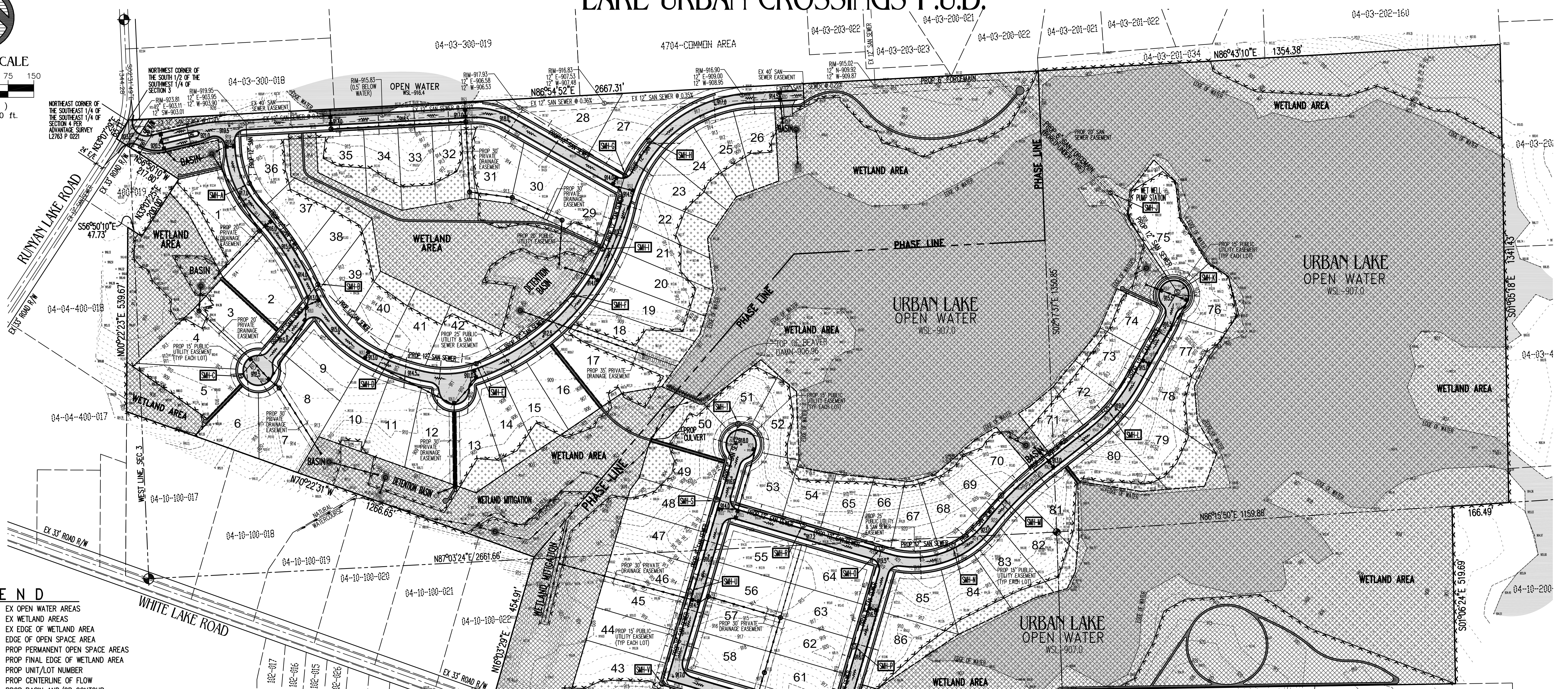
REVISIONS	DRN. BY:	J.R.B.	05.27.2021	SHEET NO:
08.04.2021	DSN BY:	J.R.B.	"	P-3
10.06.2021	CHK'D BY:	J.P.W.	"	
10.25.2021	APPR BY:	J.B.M.	"	

FILE: JOBS: 2020/20-290-WL/DWG/20-290-EX SURVEY.DWG - P.3

PRELIMINARY SITE UTILITY PLAN LAYOUT LAKE URBAN CROSSINGS P.U.D.



GRAPHIC SCALE
150 0 75 150
(IN FEET)
1 inch = 150 ft.

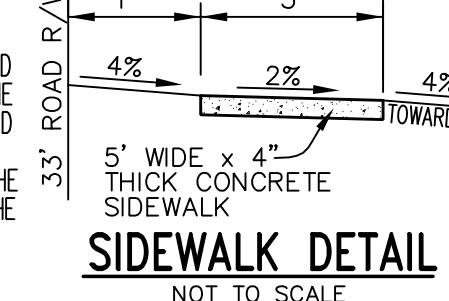
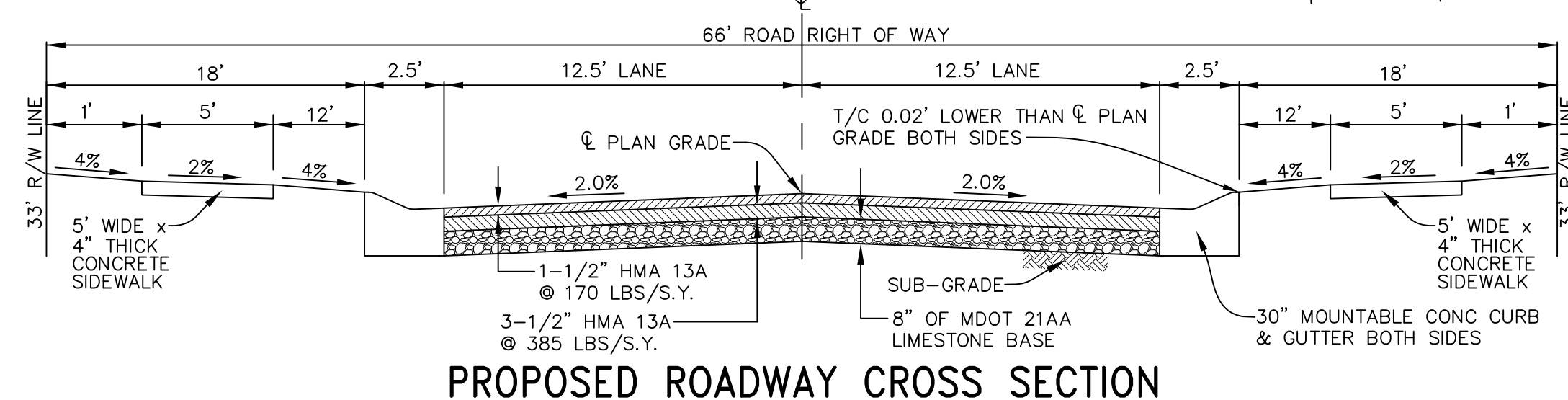
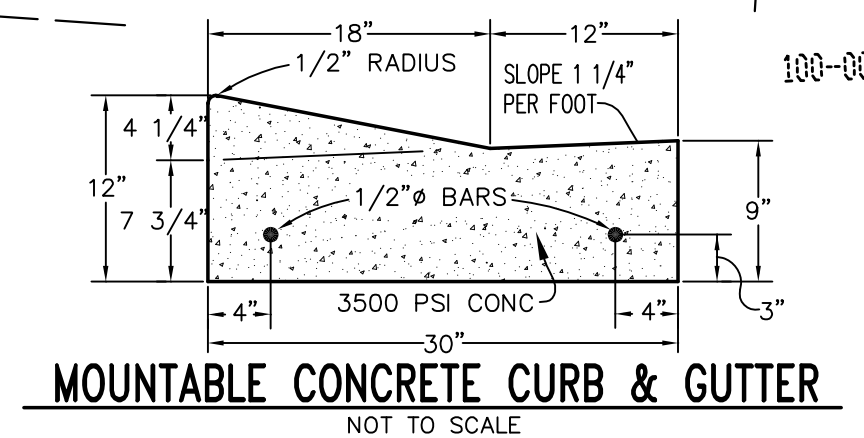


LEGEND

- EX OPEN WATER AREAS
- EX WETLAND AREAS
- EX EDGE OF WETLAND AREA
- EDGE OF OPEN SPACE AREA
- PROP PERMANENT OPEN SPACE AREAS
- PROP FINAL EDGE OF WETLAND AREA
- PROP UNIT/LOT NUMBER
- PROP CENTERLINE OF FLOW
- PROP BASIN AND/OR CONTOUR
- PROP EASEMENT LINE
- PROP ROADWAY CONCRETE SIDEWALKS
- PROP ASPHALT WALKING TRAIL
- PROP GRAVEL OR WOOD CHIP WALKING TRAIL
- PROP STORM MANHOLES
- PROP STORM SEWER LINE
- PROP SURFACE ELEVATION
- PROP DRAINAGE FLOW ARROW
- PROP SANITARY MANHOLE
- PROP SANITARY SEWER LINE
- PROP SANITARY LEAD LINE
- PROP SANITARY MANHOLE LETTER

SANITARY SEWER MH LETTER	RIM ELEVATION	INVERT (S)
EX SAN MH	EX-919.95	EX 12" E-W-903.90, PROP 12" S-904.00
SMH-A	917.50	12" N-SE-904.38
SMH-B	914.00	12" NW-SE-SW-905.17
SMH-C	913.00	12" NE-905.95
SMH-D	914.00	12" NW-E-905.83
SMH-E	912.00	12" W-NE-906.38
SMH-F	903.50	12" SW-907.16
EX SAN MH	EX-917.93	EX 12" E-W-906.55, PROP 12" SE-906.60
SMH-G	914.50	12" NW,S,NE-907.41
SMH-H	916.00	12" SW-907.68
SMH-I	915.00	12" N-907.90
EX SAN MH	EX-915.02	EX 12" N-W-909.90, PROP 6" FM E-910.00
SMH-J (PS)	909.50	PROP 6" FM NW-902.00, 12" SE-900.94 (PUMP STA)
SMH-K	915.50	12" NW,SW-901.71
SMH-L	918.50	12" NE,SW-902.59
SMH-M	919.50	12" NE,SW-903.47
SMH-N	921.50	12" NE-W-903.92
SMH-O	920.00	12" E-W-904.37, 8" SW-904.37
SMH-P	918.00	8" NE-SW-907.37
SMH-Q	918.00	8" NE-909.98
SMH-R	917.50	12" E-W-904.85
SMH-S	914.50	12" E-905.45, 8" NE,SW-905.50
SMH-T	918.50	8" SW-907.80
SMH-U	915.00	8" NE-SW-907.18
SMH-V	917.00	8" NE-908.96

SANITARY SEWER STRUCTURE SCHEDULE



GENERAL CONSTRUCTION NOTES:

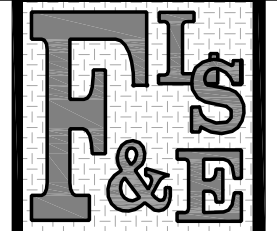
- ALL SITE CONSTRUCTION WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS OF THE 2012 MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE LATEST MDOT STANDARD ROAD PLANS, AND THE LATEST TYRONE TOWNSHIP ZONING ORDINANCE AND ENGINEERING DESIGN STANDARDS. COPIES OF ALL MDOT DOCUMENTS MAY BE OBTAINED FROM THEIR WEBSITE (WWW.MICHIGAN.GOV/MDOT).
- THE CONTRACTOR SHALL PERFORM ALL WORK NECESSARY TO GRADE THE SITE TO THE GRADES SHOWN ON THE PLANS OR SPECIFIED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION, EMBANKMENT, AND THE FURNISHING AND PLACING OF ALL BORROW MATERIAL REQUIRED TO OBTAIN THE SPECIFIED GRADES.
- ALL WORK NECESSARY TO COMPLETE THIS PROJECT SHALL CONFORM TO ALL RELATED TYRONE TOWNSHIP & LIVINGSTON COUNTY CODES AND ORDINANCES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, INSURANCE AND BONDS PRIOR TO CONSTRUCTION, INCLUDING THE PAYMENT OF ANY FEES, REQUIRED BY ANY FEDERAL, STATE, LOCAL, OR PRIVATE ORGANIZATIONS.
- SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE EMPLOYED IN ACCORDANCE WITH THE SOIL EROSION CONTROL PLAN, AND SHALL MEET THE APPROVAL OF THE LDCO-SESC AND/OR TYRONE TOWNSHIP SOIL EROSION CONTROL DEPARTMENT. CONTRACTOR SHALL OBTAIN SOIL EROSION CONTROL PERMIT FROM LDCO-SESC DEPARTMENT.
- CONTRACTOR SHALL NOTIFY ALL APPROPRIATE UTILITY COMPANIES PRIOR TO PERFORMING WORK, AND SHALL OBTAIN ANY REQUIRED PERMITS OR APPROVALS PRIOR TO PERFORMING WORK.
- THREE (3) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT MISS DIG UTILITY PROTECTION SERVICE (1-800-482-7171) TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. ALL UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED IN ACCORDANCE WITH THE UTILITY OWNERS REQUIREMENTS AT THE CONTRACTORS EXPENSE.
- PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL BE REQUIRED TO EXPOSE ALL EXISTING UTILITIES THAT CROSS THE PROPOSED CONSTRUCTION IN ORDER TO DETERMINE IF A VERTICAL CONFLICT EXISTS BETWEEN THE EXISTING UTILITY AND THE PROPOSED CONSTRUCTION. ALL UTILITIES TO BE EXPOSED SHALL BE COVERED AFTER THE EXISTING UTILITY SHALL BE CONSIDERED AS BEING INCLUDED IN THE COST OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE DEPTH AND HORIZONTAL LOCATIONS OF ALL UTILITIES IN SUFFICIENT TIME SUCH THAT ANY CONFLICTS CAN BE RESOLVED BEFORE WORK IS STARTED IN THAT PORTION OF THE PROJECT. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE VARIOUS UTILITY OWNERS TO LOCATE, REMOVE AND REPLACE OR RELOCATE THEIR FACILITIES. ALL COST FOR THIS WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- PRIOR TO BIDDING, THE CONTRACTOR AND SUBCONTRACTORS SHALL MAKE A PERSONAL INVESTIGATION OF THE SITE AND EXISTING SURFACE AND SUBSURFACE CONDITIONS. THE CONTRACTOR IS RESPONSIBLE TO ACCOUNT THEMSELVES WITH CONDITIONS OF THE WORK AREA. THE CONTRACTOR IS ADVISED TO DETERMINE THE SUBSURFACE SOIL AND GROUND WATER CONDITIONS. OTHERWISE, IF DETERMINED NECESSARY BY THE CONTRACTOR, WILL BE INCIDENTAL TO THE COST OF CONSTRUCTION.
- ALL FILL ON THE PROPERTY SHALL BE ADEQUATELY COMPACTED BY ROLLING TO PROVIDE A SURFACE SATISFACTORY FOR THE PROPER INSTALLATION OF THE PROPOSED WORK. BEFORE COMMENCING PAVING WORK, THE PAVING CONTRACTOR MUST MAKE CERTAIN THAT THE SURFACES TO BE COVERED ARE IN PROPER CONDITION. SURFACES NOT ACCEPTABLE SHALL BE REPORTED TO THE OWNER IMMEDIATELY. THE APPLICATION OF PAVING MATERIALS SHALL BE HELD TO BE AN ACCEPTANCE OF THE SURFACES AND WORKING CONDITIONS BY THE PAVING CONTRACTOR WHO WILL BE HELD RESPONSIBLE FOR THE RESULTS. ANY UNSTABLE LIMESTONE BASE OR ASPHALT PAVEMENT MUST BE REMOVED AND REPLACED BY THE CONTRACTOR AT THEIR COST AS REQUIRED BY THE OWNER AND/OR ENGINEER.
- CONTRACTOR SHALL REMOVE ALL EXISTING STRUCTURES, TREES, BRUSH, FENCES, SLABS, DRIVEWAYS AND/OR SIDEWALKS THAT ARE AFFECTED BY THE PROPOSED WORK. VISIT SITE TO DETERMINE EXTENT OF REMOVAL WORK WHICH MAY OR MAY NOT BE SHOWN ON PLANS.
- THE CONTRACTOR MUST PROVIDE ALL MEASURES REQUIRED FOR TRAFFIC CONTROL DURING CONSTRUCTION AS REQUIRED BY TYRONE TOWNSHIP AND IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS OF THE 2011 EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AS AMENDED, AND SECTION 802 OF THE 2012 MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. THE CONTRACTOR MUST PLACE PLASTIC DRUMS, TEMPORARY SIGNING, LIGHTED ARROWS, YELLOW CONSTRUCTION WARNING TAPE, AND ANY OTHER MEASURES REQUIRED TO PROTECT THE PUBLIC DURING CONSTRUCTION.
- ALL TRAFFIC SIGNS SHALL CONFORM WITH THE REQUIREMENTS OF THE 2011 EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AS AMENDED, AND SECTION 810 OF THE 2012 MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- THE CONTRACTOR SHALL CONTROL NOISE, CARRY OUT A PROGRAM OF DUST CONTROL AND SHALL ALLOW NO ON-SITE BURNING WITHOUT APPROVAL FROM LOCAL FIRE DEPARTMENT.

PRELIMINARY REVIEW

SCALE: 1"=150'
JOB NO. 20-290

OWNER/DEVELOPER:
LAKE URBAN DEV, LLC
C/O WILSON & LINO
8273 S SAGINAW ST. GRAND BLANC, MI 48439
CONTACT: 810.244.6302

PART OF SECTIONS 3 & 10
TYRONE TOWNSHIP, T4N-R6E
LIVINGSTON COUNTY, MICHIGAN



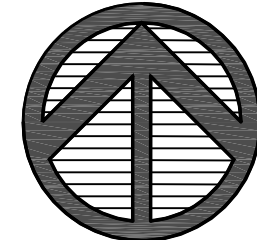
Fenton Land Surveying & Engineering, Inc
14165 N. FENTON ROAD, SUITE 101A, FENTON, MI 48430
PHONE: 810.354.8115 EMAIL: INFO@FENTONLSE.COM

PRELIMINARY SITE UTILITY PLAN LAYOUT FOR:
LAKE URBAN CROSSINGS P.U.D. CONDOMINIUM
PART OF SECTIONS 3 & 10, T4N-R6E,
TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

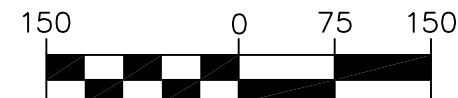
REVISIONS	DRN. BY:	J.R.B.	05.27.2021	SHEET NO:
08.04.2021	DSN BY:	J.R.B.	"	P-4
10.06.2021	CHK'D BY:	J.P.W.	"	
10.25.2021	APPR BY:	J.B.M.	"	

FILED: JOBS: 2020/20-290-WL/DWG/20-290 UTILITY PLAN LAYOUT.DWG - P-4

NORTH



GRAPHIC SCALE

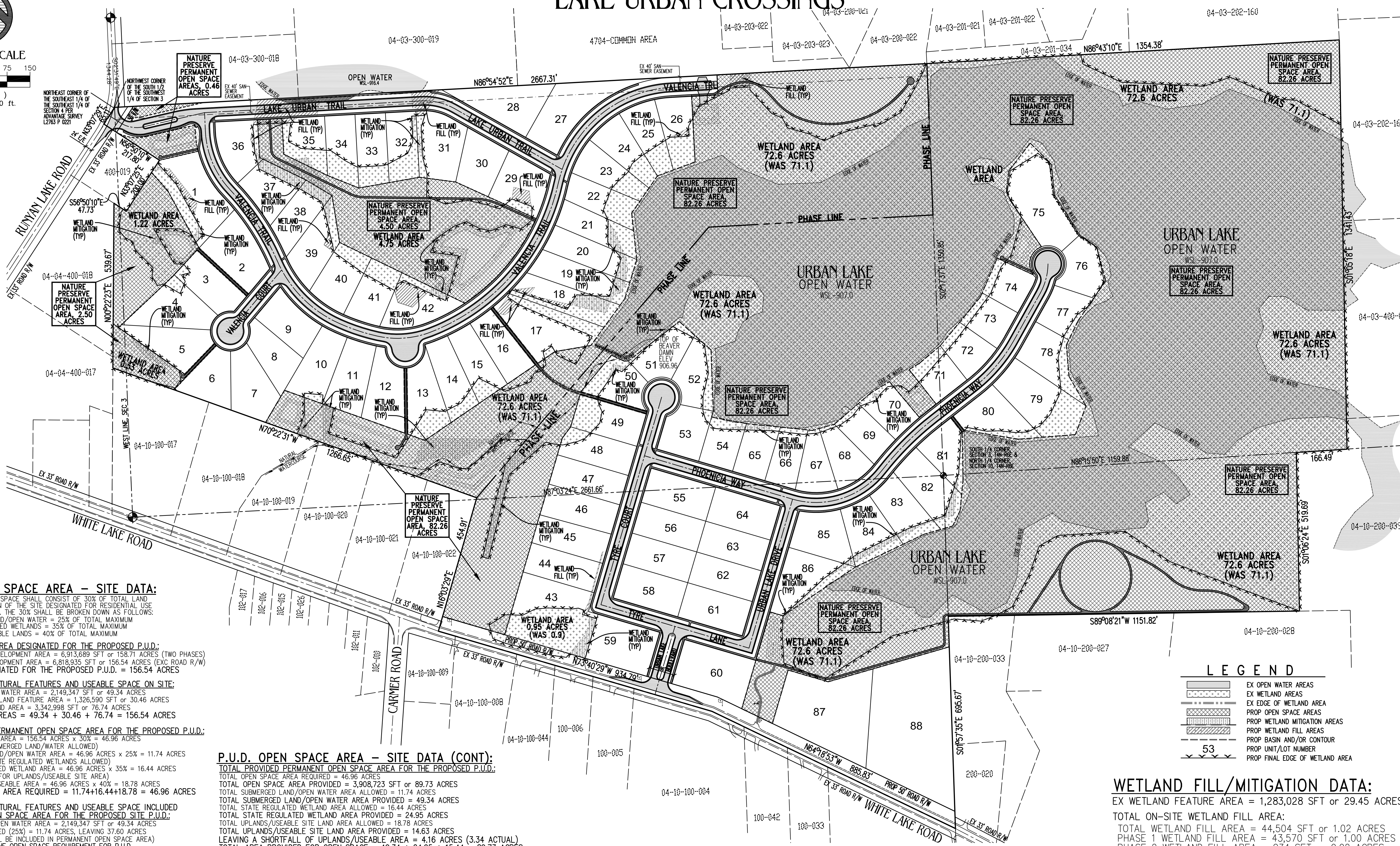


(IN FEET)
1 inch = 150 ft.

NORTHEAST CORNER OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 4 PER ADVANTAGE SURVEY L2763 P. 022

NORTHWEST CORNER OF THE SOUTH 1/2 OF THE SOUTHWEST 1/4 OF SECTION 3

PRELIMINARY SITE OPEN SPACE PLAN LAKE URBAN CROSSINGS



P.U.D. OPEN SPACE AREA - SITE DATA:

THE P.U.D. OPEN SPACE AREA SHALL CONSIST OF 30% OF TOTAL LAND AREA OF THAT PORTION OF THE SITE DESIGNATED FOR RESIDENTIAL USE. THE 30% SHALL BE BROKEN DOWN AS FOLLOWS:
1. SUBMERGED LAND/OPEN WATER = 25% OF TOTAL MAXIMUM
2. STATE REGULATED WETLANDS = 35% OF TOTAL MAXIMUM
3. UPLANDS/USEABLE LANDS = 40% OF TOTAL MAXIMUM

TOTAL PROPERTY AREA DESIGNATED FOR THE PROPOSED P.U.D.:
TOTAL GROSS SITE DEVELOPMENT AREA = 6,913,689 SFT or 158.71 ACRES (TWO PHASES)
TOTAL NET SITE DEVELOPMENT AREA = 6,818,935 SFT or 156.54 ACRES (EXC ROAD R/W)
TOTAL AREA DESIGNATED FOR THE PROPOSED P.U.D. = 156.54 ACRES

TOTAL AREA OF NATURAL FEATURES AND USEABLE SPACE ON SITE:
SUBMERGED LAND/OPEN WATER AREA = 2,149,347 SFT or 49.34 ACRES
STATE REGULATED WETLAND FEATURE AREA = 1,326,590 SFT or 30.46 ACRES
UPLANDS/USEABLE LAND AREA = 3,342,998 SFT or 76.74 ACRES
TOTAL SPECIFIED AREAS = 49.34 + 30.46 + 76.74 = 156.54 ACRES

TOTAL REQUIRED PERMANENT OPEN SPACE AREA FOR THE PROPOSED P.U.D.:
TOTAL NET P.U.D. SITE AREA = 156.54 ACRES x 30% = 46.96 ACRES
(25% MAXIMUM OF SUBMERGED LAND/WATER ALLOWED)
TOTAL SUBMERGED LAND/OPEN WATER AREA = 46.96 ACRES x 25% = 11.74 ACRES
(35% MAXIMUM OF STATE REGULATED WETLANDS ALLOWED)
TOTAL STATE REGULATED WETLAND AREA = 46.96 ACRES x 35% = 16.44 ACRES
(REMAINING 40% USED FOR UPLANDS/USEABLE SITE AREA)
TOTAL UPLAND/USEABLE AREA = 46.96 ACRES x 40% = 18.78 ACRES
TOTAL OPEN SPACE AREA REQUIRED = 11.74+16.44+18.78 = 46.96 ACRES

TOTAL AREA OF NATURAL FEATURES AND USEABLE SPACE INCLUDED IN PERMANENT OPEN SPACE AREA FOR THE PROPOSED P.U.D.:
EX SUBMERGED LAND/OPEN WATER AREA = 2,149,347 SFT or 49.34 ACRES
MAXIMUM AREA ALLOWED (25%) = 11.74 ACRES, LEAVING 37.60 ACRES
(ALL 49.34 ACRES WILL BE INCLUDED IN PERMANENT OPEN SPACE AREA)
MEETS OR EXCEEDS THE OPEN SPACE REQUIREMENT FOR P.U.D.
EX STATE REGULATED WETLAND FEATURE AREA = 1,086,814 SFT or 24.95 ACRES
MAXIMUM AREA ALLOWED (35%) = 16.44 ACRES, LEAVING 851 ACRES
(ALL 24.95 ACRES WILL BE INCLUDED IN PERMANENT OPEN SPACE AREA)
MEETS OR EXCEEDS THE OPEN SPACE REQUIREMENT FOR P.U.D.
REMAINING UPLANDS/USEABLE LAND AREA = 672,562 SFT or 15.44 ACRES
MAXIMUM AREA ALLOWED (40%) = 18.78 ACRES, PROVIDING 15.44 ACRES
(ONLY 14.63 ACRES OF UPLANDS/USEABLE (15.44 ACRES TOTAL) WILL BE INCLUDED IN PERMANENT OPEN SPACE AREA, COMPRISED OF 113.81 ACRES OF TRUE UPLAND/USEABLE AREAS AND 1.63 ACRES OF BASIN AREA, A MAX OF 50% OF BASIN AREA ALLOWED = 70,797 SFT x 50% = 35,399 SFT or 0.815 ACRES.
A SHORTFALL OF 18.78 - 13.81 = 4.97 ACRES (3.34 ACTUAL) DOES NOT MEET MINIMUM REQUIREMENT FOR OPEN SPACE FOR P.U.D.

P.U.D. OPEN SPACE AREA - SITE DATA (CONT):

TOTAL PROVIDED PERMANENT OPEN SPACE AREA FOR THE PROPOSED P.U.D.:
TOTAL OPEN SPACE AREA REQUIRED = 46.96 ACRES
TOTAL OPEN SPACE AREA PROVIDED = 3,908,723 SFT or 89.73 ACRES
TOTAL SUBMERGED LAND/OPEN WATER AREA ALLOWED = 11.74 ACRES
TOTAL SUBMERGED LAND/OPEN WATER AREA PROVIDED = 49.34 ACRES
TOTAL STATE REGULATED WETLAND AREA ALLOWED = 16.44 ACRES
TOTAL STATE REGULATED WETLAND AREA PROVIDED = 24.95 ACRES
TOTAL UPLANDS/USEABLE SITE LAND AREA ALLOWED = 18.78 ACRES
TOTAL UPLANDS/USEABLE SITE LAND AREA PROVIDED = 14.63 ACRES
LEAVING A SHORTFALL OF UPLANDS/USEABLE AREA = 4.16 ACRES (3.34 ACTUAL)
TOTAL AREA PROVIDED FOR OPEN SPACE = 49.34 + 24.95 + 15.44 = 89.73 ACRES
OF WHICH ONLY 88.92 ACRES CAN BE USED DUE TO 50% OF BASIN AREA APPLIED.

NOTE: THE PLANNING COMMISSION MAY RECOMMEND, AND THE TOWNSHIP BOARD MAY APPROVE, MODIFICATIONS OF THE 30 PERCENT REQUIREMENT IF IT FINDS THAT THE SITE CHARACTERISTICS, SURROUNDING NATURAL FEATURES, AND PROPOSED DESIGN FEATURES AND USES LEND THEMSELVES TO DIFFERENT OPEN SPACE AREA REQUIREMENTS.

THE OWNER IS ASKING FOR APPROVALS FOR THE MODIFICATION OF THE OPEN SPACE DUE TO THE CHARACTERISTICS, THE SURROUNDING NATURAL FEATURES, AND THE PROPOSED DESIGN FEATURES AS SHOWN ON THESE PLANS, CREATING A 89.73 ACRE PERMANENT OPEN SPACE AREA FOR THE PROPOSED P.U.D. (88.92 ACRES CREDITED) NEARLY TWICE THE AMOUNT THAT IS REQUIRED BASED ON TOWNSHIP REQUIREMENTS.

LEGEND	
	EX OPEN WATER AREAS
	EX WETLAND AREAS
	EX EDGE OF WETLAND AREA
	PROP OPEN SPACE AREAS
	PROP WETLAND MITIGATION AREAS
	PROP WETLAND FILL AREAS
	PROP BASIN AND/OR CONTOUR
	PROP UNIT/LOT NUMBER
	PROP FINAL EDGE OF WETLAND AREA

WETLAND FILL/MITIGATION DATA:

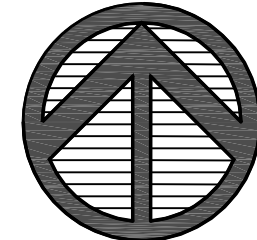
EX WETLAND FEATURE AREA = 1,283,028 SFT or 29.45 ACRES
TOTAL ON-SITE WETLAND FILL AREA:
TOTAL WETLAND FILL AREA = 44,504 SFT or 1.02 ACRES
PHASE 1 WETLAND FILL AREA = 43,570 SFT or 1.00 ACRES
PHASE 2 WETLAND FILL AREA = 934 SFT or 0.02 ACRES
TOTAL ON-SITE WETLAND MITIGATION AREA:
TOTAL WETLAND MITIGATION AREA = 88,066 SFT or 2.02 ACRES
PHASE 1 WETLAND MITIGATION AREA = 60,502 SFT or 1.39 ACRES
PHASE 2 WETLAND MITIGATION AREA = 27,564 SFT or 0.63 ACRES
PROP WETLAND FEATURE AREA = 1,326,590 SFT or 30.46 ACRES

PRELIMINARY REVIEW

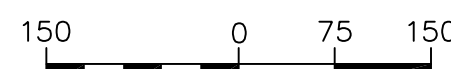
SCALE: 1"=150'	OWNER/DEVELOPER: LAKE URBAN DEV, LLC C/O WILSON & LINO 8273 S SAGINAW ST, GRAND BLANC, MI 48439 CONTACT: 810.244.6302	PART OF SECTIONS 3 & 10 TYRONE TOWNSHIP, T4N-R6E LIVINGSTON COUNTY, MICHIGAN		Fenton Land Surveying & Engineering, Inc 14165 N. FENTON ROAD, SUITE 101A, FENTON, MI 48430 PHONE: 810.354.8115 EMAIL: INFO@FENTONLSE.COM	PRELIMINARY SITE OPEN SPACE PLAN FOR: LAKE URBAN CROSSINGS CONDOMINIUM PART OF SECTIONS 3 & 10, T4N-R6E, TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN	<table border="1"> <tr> <th>REVISIONS</th> <th>DRN. BY:</th> <th>J.R.B.</th> <th>05.27.2021</th> <th>SHEET NO:</th> </tr> <tr> <td>08.04.2021</td> <td>DSN BY:</td> <td>J.R.B.</td> <td>"</td> <td rowspan="3">P-5</td> </tr> <tr> <td>10.19.2021</td> <td>CHK'D BY:</td> <td>J.P.W.</td> <td>"</td> </tr> <tr> <td></td> <td>APPR BY:</td> <td>J.B.M.</td> <td>"</td> </tr> </table>	REVISIONS	DRN. BY:	J.R.B.	05.27.2021	SHEET NO:	08.04.2021	DSN BY:	J.R.B.	"	P-5	10.19.2021	CHK'D BY:	J.P.W.	"		APPR BY:	J.B.M.	"
REVISIONS	DRN. BY:	J.R.B.	05.27.2021	SHEET NO:																				
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	APPR BY:	J.B.M.	"																					

FILE NO. 2019-20-290-WL/DWG/20-290-020 OPEN SPACE PLANNING - P-5

NORTH



GRAPHIC SCALE

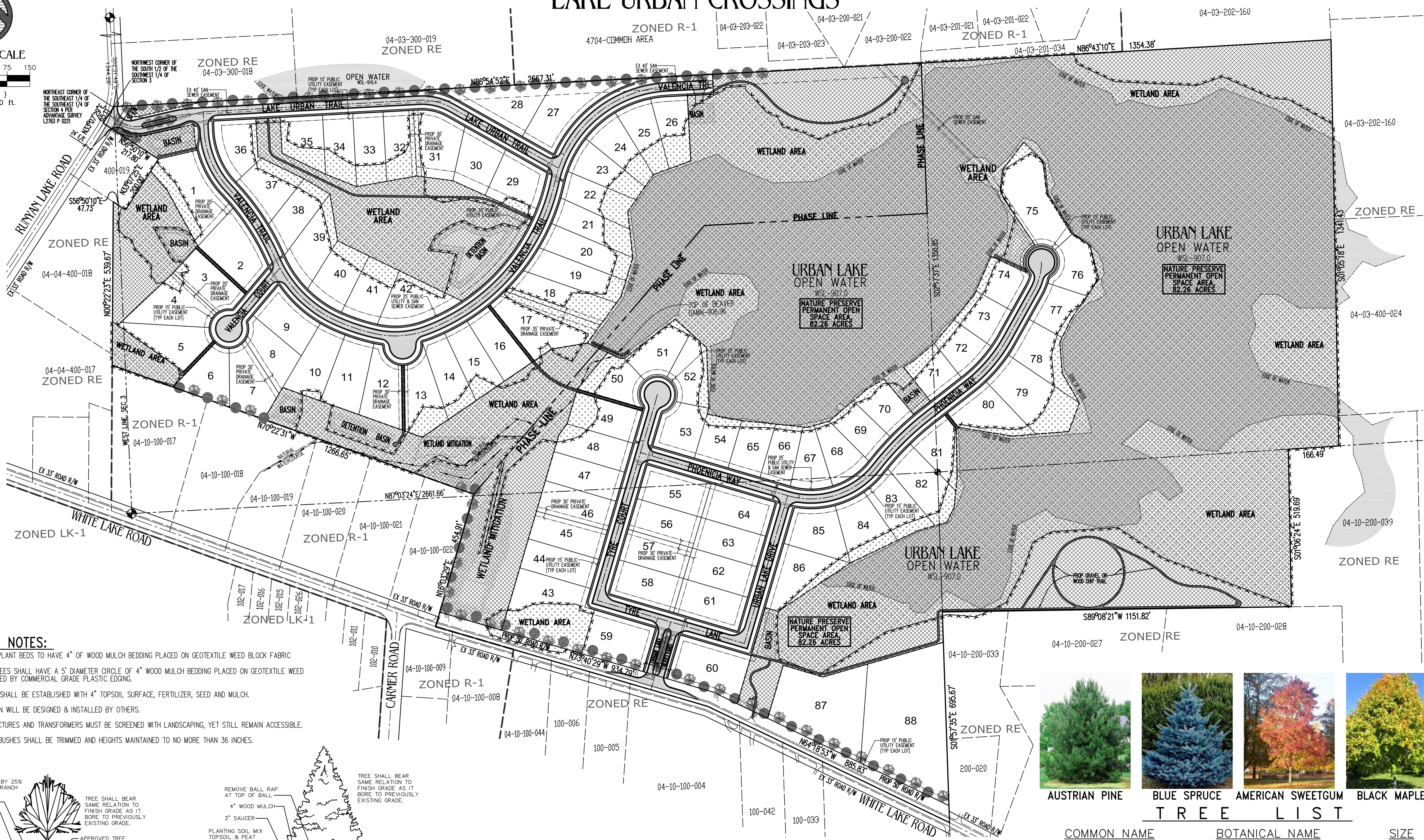


(IN FEET)
1 inch = 150 ft.

NORTHEAST CORNER OF THE SOUTHWEST 1/4 OF SECTION 4 PER ADVANTAGE SURVEY L2763 P.022

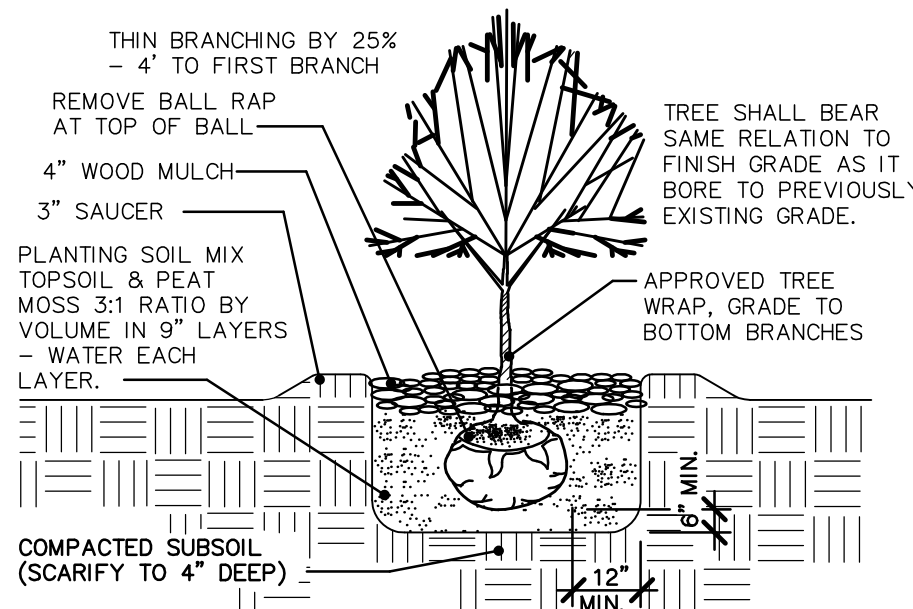
NORTHWEST CORNER OF THE SOUTHWEST 1/4 OF SECTION 3

PRELIMINARY SITE LANDSCAPING PLAN LAKE URBAN CROSSINGS

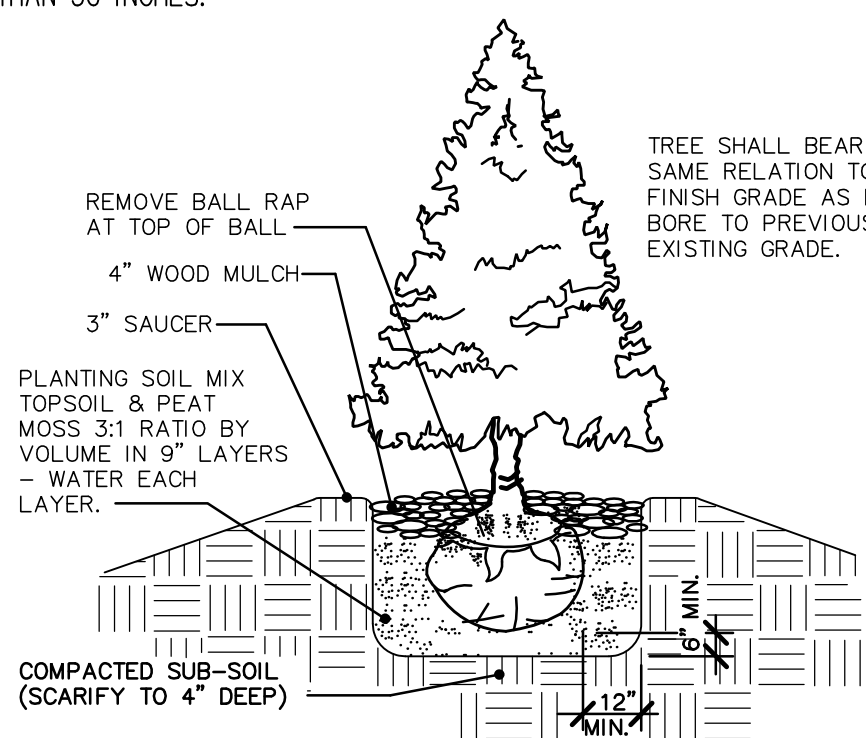


LANDSCAPE NOTES:

1. ALL CORNER LOT PLANT BEDS TO HAVE 4" OF WOOD MULCH BEDDING PLACED ON GEOTEXTILE WEED BLOCK FABRIC - 4" TO FIRST BRANCH
2. ALL NEW LAWN TREES SHALL HAVE A 5' DIAMETER CIRCLE OF 4" WOOD MULCH BEDDING PLACED ON GEOTEXTILE WEED BLOCK FABRIC BOUNDED BY COMMERCIAL GRADE PLASTIC EDGING.
3. ALL LAWN AREAS SHALL BE ESTABLISHED WITH 4" TOPSOIL SURFACE, FERTILIZER, SEED AND MULCH.
4. ON-SITE IRRIGATION WILL BE DESIGNED & INSTALLED BY OTHERS.
5. ALL UTILITY STRUCTURES AND TRANSFORMERS MUST BE SCREENED WITH LANDSCAPING, YET STILL REMAIN ACCESSIBLE.
6. ALL SHRUBS AND BUSHES SHALL BE TRIMMED AND HEIGHTS MAINTAINED TO NO MORE THAN 36 INCHES.



TREE PLANTING DETAIL



EVERGREEN PLANTING DETAIL

LANDSCAPE REQUIRED:

GREENBELT BUFFER:

- A) 1 TREE PER 50 FEET OF ROAD FRONTAGE
- B) 1 TREE PER 50 FEET OF ADJACENT SITE BUFFER



AUSTRIAN PINE BLUE SPRUCE AMERICAN SWEETGUM BLACK MAPLE
TREE LIST

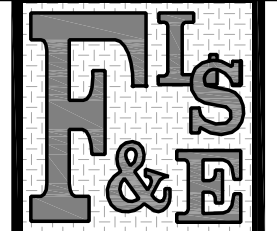
COMMON NAME	BOTANICAL NAME	SIZE
AUSTRIAN PINE	PINUS NIGRA	6' HGT
BLUE SPRUCE	PICEA PUNGENS GLAUCA	6' HGT
BLACK MAPLE	ACER NIGRUM	2" CALIPER
AMERICAN SWEETGUM	LIQUIDAMBAR STYRACIFLUA	2" CALIPER

PRELIMINARY REVIEW

SCALE: 1"=150'
JOB NO. 20-290

OWNER/DEVELOPER:
LAKE URBAN DEV, LLC
C/O WILSON & LINO
8273 S SAGINAW ST, GRAND BLANC, MI 48439
CONTACT: 810.244.6302

PART OF SECTIONS 3 & 10
TYRONE TOWNSHIP, T4N-R6E
LINGSTON COUNTY, MICHIGAN



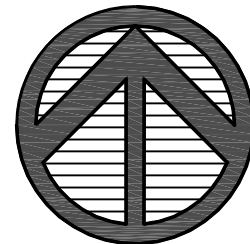
Fenton Land Surveying & Engineering, Inc
14165 N. FENTON ROAD, SUITE 101A, FENTON, MI 48430
PHONE: 810.354.8115 EMAIL: INFO@FENTONLSE.COM

PRELIMINARY SITE LANDSCAPING PLAN FOR:
LAKE URBAN CROSSINGS CONDOMINIUM
PART OF SECTIONS 3 & 10, T4N-R6E,
TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

REVISIONS	DRN. BY:	J.R.B.	08.04.2021	SHEET NO:
10.06.2021	DSN BY:	J.R.B.	"	P-6
10.25.2021	CHK'D BY:	J.P.W.	"	
	APPR BY:	J.B.M.	"	

ELSE JOBS: 2020/20-290-WL/DWG/20-290 LANDSCAPING PLANNING - P-6

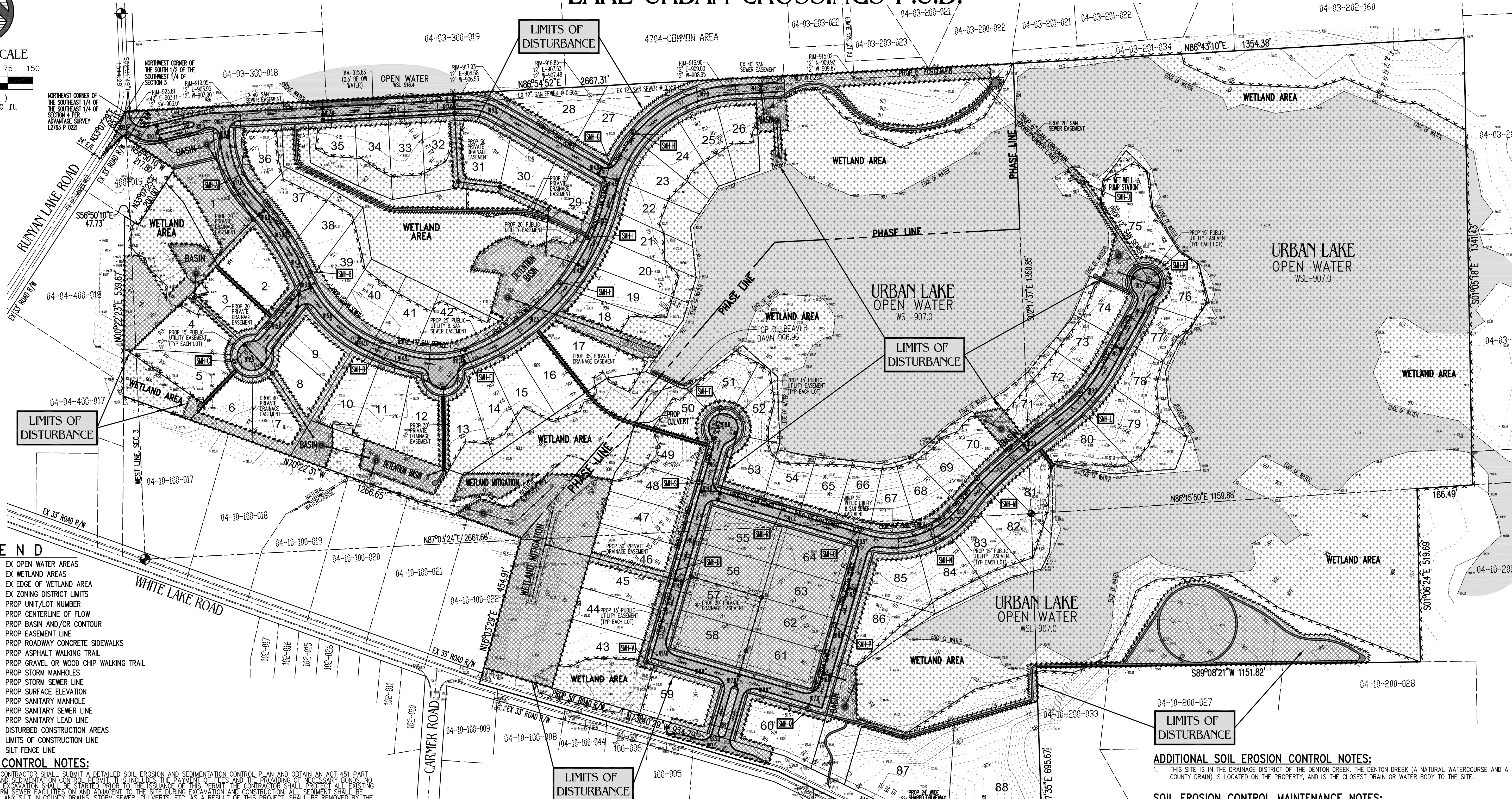
NORTH



GRAPHIC SCALE
150 0 75 150
(IN FEET)
1 inch = 150 ft.

AREA OF DISTURBANCE = 36.5 ACRES

PRELIMINARY LIMITS OF CONSTRUCTION PLAN LAKE URBAN CROSSINGS P.U.D.



LEGEND

- EX OPEN WATER AREAS
- EX WETLAND AREAS
- EX EDGE OF WETLAND AREA
- EX ZONING DISTRICT LIMITS
- PROP UNIT/LOT NUMBER
- PROP CENTERLINE OF FLOW
- PROP BASIN AND/OR CONTOUR
- PROP EASEMENT LINE
- PROP ROADWAY CONCRETE SIDEWALKS
- PROP ASPHALT WALKING TRAIL
- PROP GRAVEL OR WOOD CHIP WALKING TRAIL
- PROP STORM MANHOLES
- PROP STORM SEWER LINE
- PROP SURFACE ELEVATION
- PROP SANITARY MANHOLE
- PROP SANITARY SEWER LINE
- PROP SANITARY LEAD LINE
- DISTURBED CONSTRUCTION AREAS
- LIMITS OF CONSTRUCTION LINE
- SILT FENCE LINE

SOIL EROSION CONTROL NOTES:

1. SOIL EROSION: THE CONTRACTOR SHALL SUBMIT A DETAILED SOIL EROSION AND SEDIMENTATION CONTROL PLAN AND OBTAIN AN ACT 451 PART 91 SOIL EROSION AND SEDIMENTATION CONTROL PERMIT. THIS INCLUDES THE PAYMENT OF FEES AND THE PROVIDING OF NECESSARY BONDS. NO EARTH CHANGES OR EXCAVATION SHALL BE STARTED PRIOR TO THE ISSUANCE OF THIS PERMIT. THE CONTRACTOR SHALL PROTECT ALL EXISTING AND PROPOSED STORM SEWER FACILITIES ON AND ADJACENT TO THE SITE DURING EXCAVATION AND CONSTRUCTION. ALL SEDIMENT SHALL BE CONTAINED ON SITE. ANY SILT IN COUNTY DRAINS, STORM SEWER, CULVERTS, ETC. AS A RESULT OF THIS PROJECT, SHALL BE REMOVED BY THE CONTRACTOR AT THE COST OF THE CONTRACTOR.
2. ALL SOIL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF TYRONE TOWNSHIP AND THE LIVINGSTON COUNTY DRAIN COMMISSIONERS. THE CONTRACTOR SHALL OBTAIN A SOIL EROSION AND SEDIMENTATION CONTROL PERMIT OR WAIVER FROM THEM PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS.
3. SOIL EROSION AND SEDIMENTATION CONTROL MEASURES MUST BE PLACED PRIOR TO OR AS THE FIRST STEP IN CONSTRUCTION. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
4. CONTRACTOR SHALL PLACE AND MAINTAIN ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY TYRONE TOWNSHIP, LOCAL AND AS SHOWN ON THESE PLANS. CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AS SOON AS ALL PERMANENT EROSION CONTROL MEASURES HAVE BEEN COMPLETED AND APPROVED BY THE TYRONE TOWNSHIP AND LDCD.
5. EROSION AND ANY SEDIMENT CREATED FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN ANY DRAINAGE FACILITIES. DRAINAGE FACILITIES INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES, AND PONDS.
6. ALL MUD, DIRT, AND DEBRIS TRACKED ONTO EXISTING ROADS FROM THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR. ALL MUD, DIRT, AND DEBRIS TRACKED OR SPILLED ONTO PAVED SURFACES WITHIN THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
7. CONTRACTOR MUST IMPLEMENT APPROPRIATE MEASURES AS REQUIRED TO CONTROL DUST AT ALL TIMES, AS APPROVED BY TYRONE TOWNSHIP AND LDCD.
8. DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR TO DETERMINE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES, AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
9. FAILURE TO COMPLY WITH ALL APPLICABLE SOIL EROSION AND SEDIMENTATION CONTROL REQUIREMENTS MAY RESULT IN WORK STOPPAGE BY TYRONE TOWNSHIP AND LDCD.
10. CONTRACTOR MUST IMMEDIATELY HAUL AWAY ALL EXCAVATED DIRT TO AN APPROVED OFF-SITE LOCATION, OR TEMPORARILY STORE THE MATERIAL ON THE SITE. ALL STORED MATERIAL MUST BE PROTECTED TO PREVENT EROSION.
11. THE CONTRACTOR MUST PROVIDE A WRITTEN SCHEDULE INDICATING THE TIMING AND SEQUENCING OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND CONSTRUCTION ITEMS, INCLUDING THE INSTALLATION OF ALL PERMANENT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES.
12. APPROXIMATELY 36.5 ACRES WILL BE DISTURBED IN CONSTRUCTION OF THIS PROJECT, THEREFORE A NPDES STORM WATER DISCHARGE PERMIT WILL BE REQUIRED.

ADDITIONAL SOIL EROSION CONTROL NOTES:

1. THIS SITE IS IN THE DRAINAGE DISTRICT OF THE DENTON CREEK. THE DENTON CREEK (A NATURAL WATERCOURSE AND A COUNTY DRAIN) IS LOCATED ON THE PROPERTY, AND IS THE CLOSEST DRAIN OR WATER BODY TO THE SITE.

SOIL EROSION CONTROL MAINTENANCE NOTES:

1. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING ANY PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. IF THE FABRIC DECOMPOSES OR BECOMES INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE, AND THE BARRIER IS STILL REQUIRED, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE CLEANED AND MAINTAINED AS REQUIRED SUCH THAT THE MEASURES ARE EFFECTIVE AND IN PROPER WORKING ORDER AT ALL TIMES.
4. ALL MUD/DIRT TRACKED ONTO ROADS OR THE PARKING LOT FROM THE SITE DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
5. ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES, BOTH PERMANENT AND TEMPORARY, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

SOIL EROSION CONTROL CONSTRUCTION SEQUENCE:

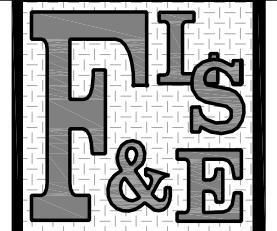
1. PLACE ALL TEMPORARY SOIL EROSION CONTROL MEASURES AS PER THESE PLANS.
2. SAWCUT & REMOVE PAVEMENT AREAS, AS SHOWN ON THESE PLANS.
3. CONSTRUCT ALL PROPOSED UTILITIES AND THE DETENTION BASINS, AS SHOWN ON THESE PLANS.
4. CONST PROPOSED BUILDINGS, PAVEMENT AREAS, CURBS, AND DRIVEWAY APPROACHES, AS SHOWN ON THESE PLANS.
5. PLACE 4" TOPSOIL, FERTILIZER, SEED, AND MULCH TO RESTORE ALL DISTURBED TURF AREAS.
6. REMOVE ALL TEMPORARY SOIL EROSION CONTROL MEASURES AFTER ALL SITE CONSTRUCTION HAS BEEN COMPLETED, AND ALL NEW TURF AREAS HAVE BEEN FULLY ESTABLISHED.
7. CONTRACTOR SHALL KEEP STREET AND ALL OTHER PAVEMENT CLEAN AT ALL TIMES, AND PREVENT DUST POLLUTION.

FILE: JOBS 2020/20-290-WL/DWG/20-290 LIMITS OF CONSTRUCTION - P-7

SCALE: 1"=150'
JOB NO. 20-290

OWNER/DEVELOPER:
LAKE URBAN DEV, LLC
C/O WILSON & LINO
8273 S SAGINAW ST. GRAND BLANC, MI 48439
CONTACT: 810.244.6302

PART OF SECTIONS 3 & 10
TYRONE TOWNSHIP, T4N-R6E
LIVINGSTON COUNTY, MICHIGAN



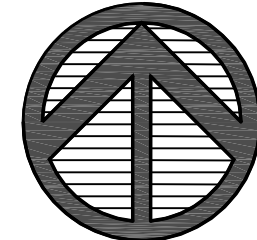
Fenton Land Surveying & Engineering, Inc
14165 N. FENTON ROAD, SUITE 101A, FENTON, MI 48430
PHONE: 810.354.8115 EMAIL: INFO@FENTONLSE.COM

PRELIMINARY LIMITS OF CONSTRUCTION PLAN FOR:
LAKE URBAN CROSSINGS P.U.D. CONDOMINIUM
PART OF SECTIONS 3 & 10, T4N-R6E,
TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

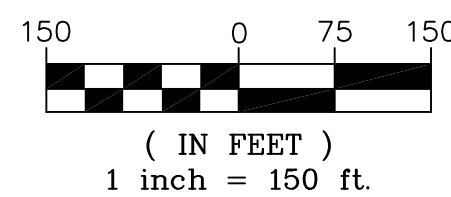
REVISIONS	DRN. BY:	J.R.B.	10.25.2021	SHEET NO:
	DSN BY:	J.R.B.	"	P-7
	CHK'D BY:	J.P.W.	"	
	APPR BY:	J.B.M.	"	

PRELIMINARY REVIEW

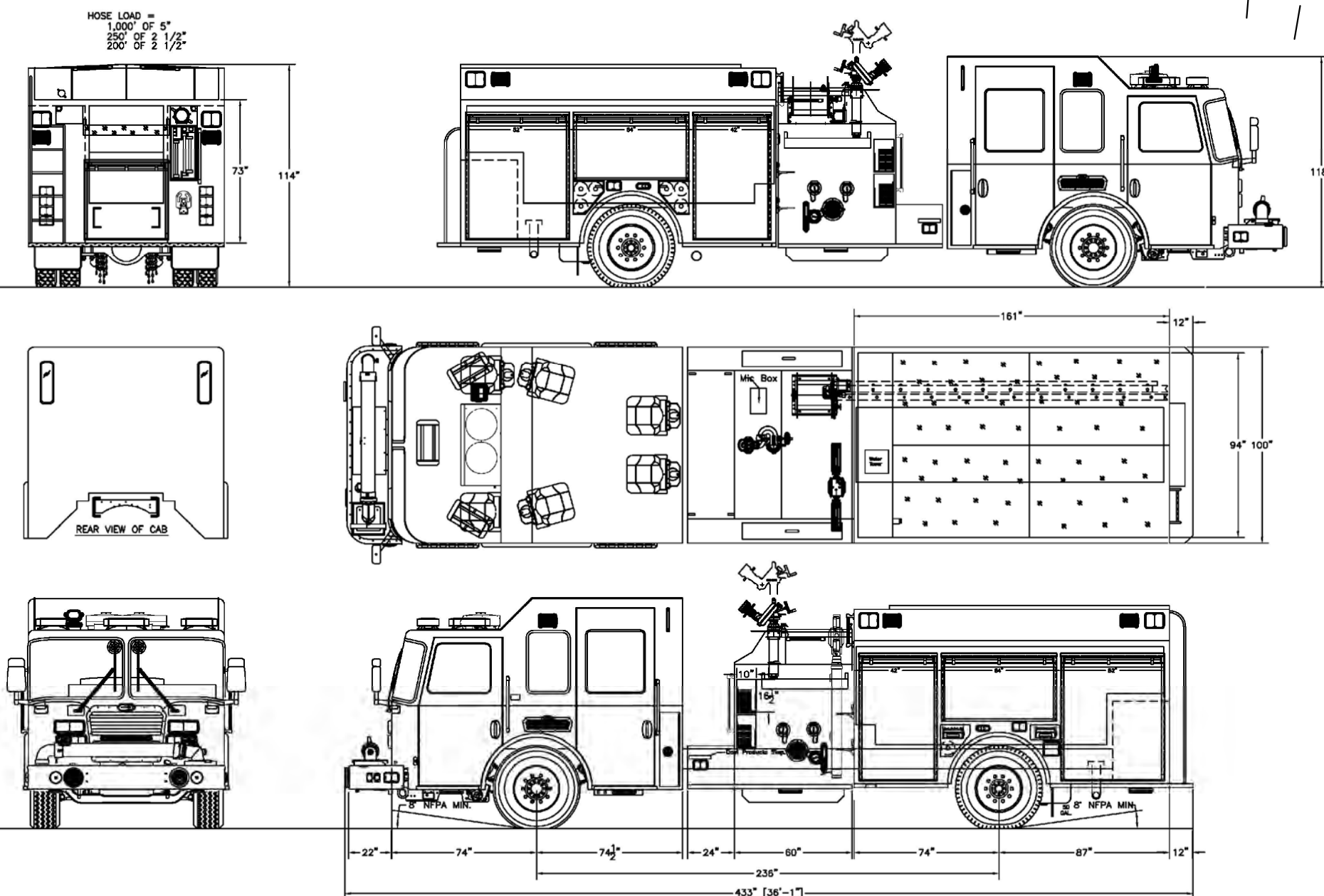
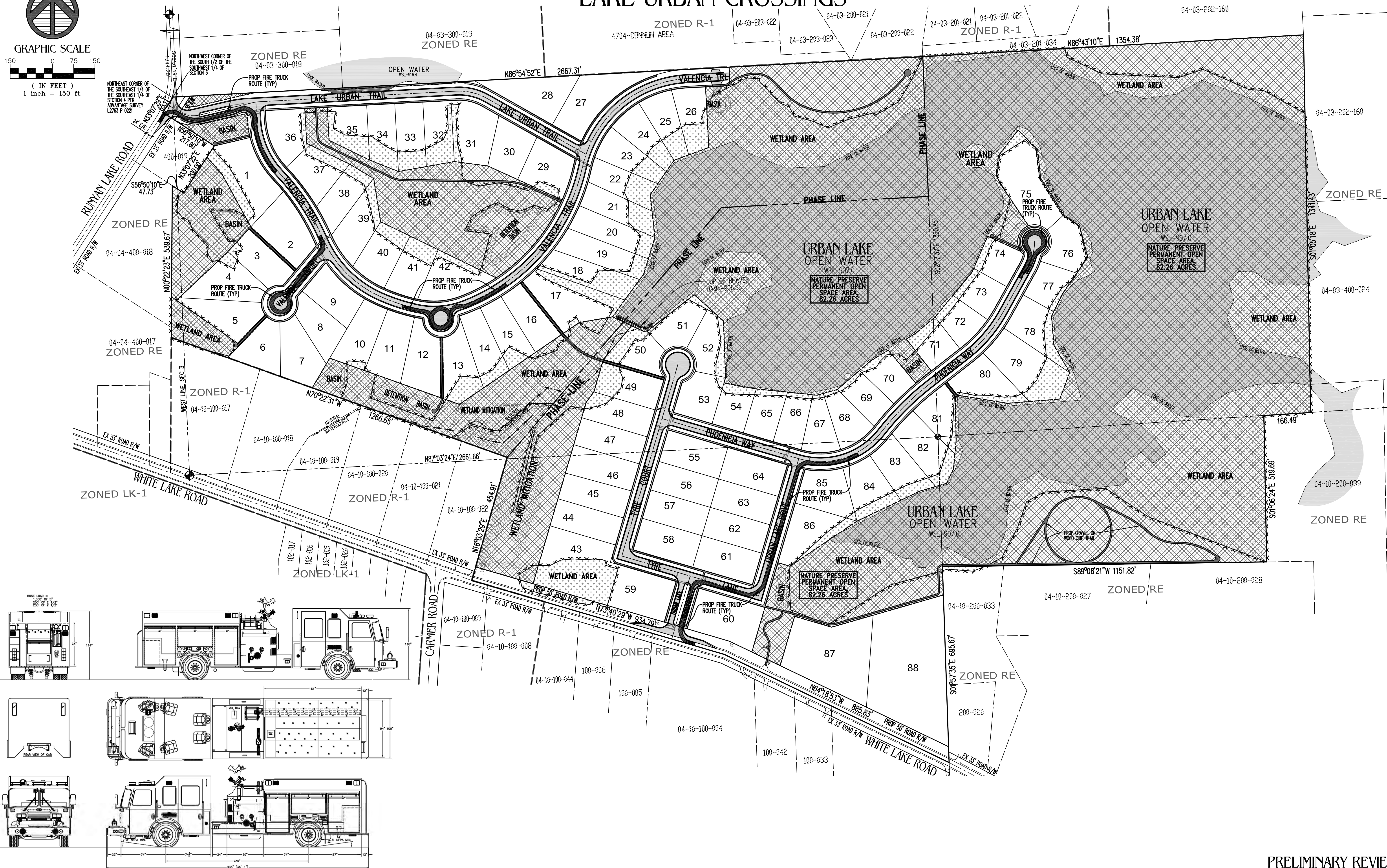
NORTH



GRAPHIC SCALE



PRELIMINARY FIRE TRUCK ROUTE PLAN LAKE URBAN CROSSINGS



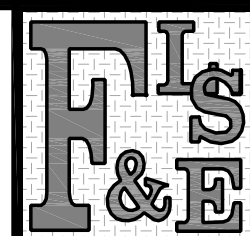
ELSE JOBS: 2020-20-290-WL/DWG/20-290 FIRE TRUCK ROUTE PLANNING - P-8

SCALE: 1"=150'

JOB NO. 20-290

OWNER/DEVELOPER:
LAKE URBAN DEV, LLC
C/O WILSON & LINO
8273 S SAGINAW ST, GRAND BLANC, MI 48439
CONTACT: 810.244.6302

PART OF SECTIONS 3 & 10
TYRONE TOWNSHIP, T4N-R6E
LIVINGSTON COUNTY, MICHIGAN



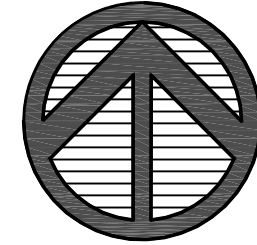
Fenton Land Surveying & Engineering, Inc
14165 N. FENTON ROAD, SUITE 101A, FENTON, MI 48430
PHONE: 810.354.8115 EMAIL: INFO@FENTONLSE.COM

PRELIMINARY FIRE TRUCK ROUTE PLAN FOR:
LAKE URBAN CROSSINGS CONDOMINIUM
PART OF SECTIONS 3 & 10, T4N-R6E,
TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

REVISIONS	DRN. BY:	J.R.B.	10.25.2021	SHEET NO:
	DSN BY:	J.R.B.	"	P-8
	CHK'D BY:	J.P.W.	"	
	APPR BY:	J.B.M.	"	

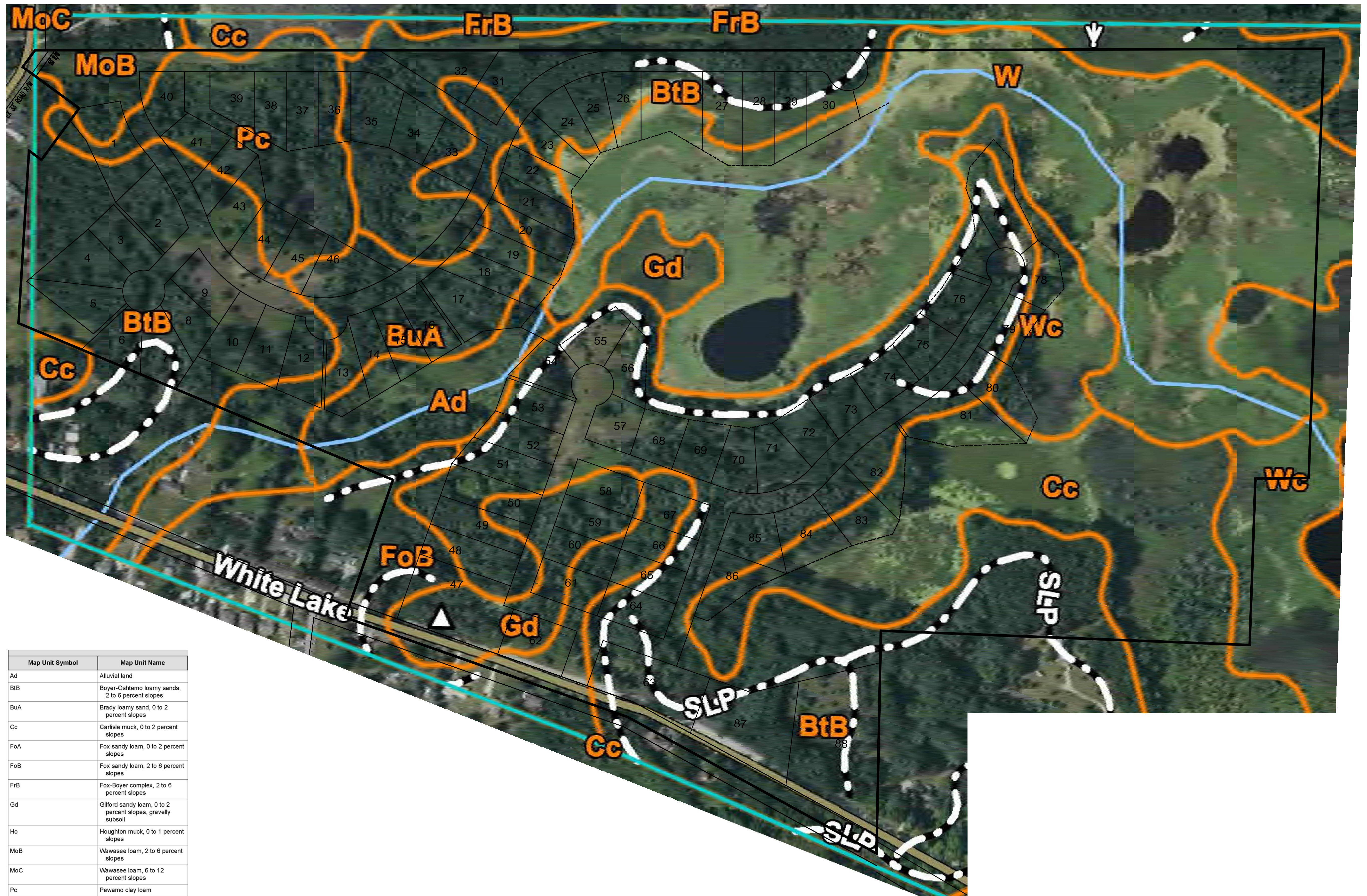
PRELIMINARY REVIEW

NORTH



GRAPHIC SCALE
150 0 75 150
(IN FEET)
1 inch = 150 ft.

PRELIMINARY SOILS INFORMATION PLAN LAKE URBAN CROSSINGS P.U.D.



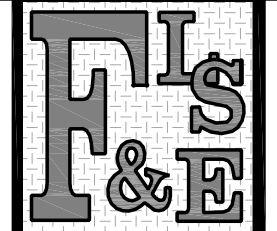
Map Unit Symbol	Map Unit Name
Ad	Alluvial land
BtB	Boyer-Oshtemo loamy sands, 2 to 6 percent slopes
BuA	Brady loamy sand, 0 to 2 percent slopes
Cc	Carlisle muck, 0 to 2 percent slopes
FoA	Fox sandy loam, 0 to 2 percent slopes
FoB	Fox sandy loam, 2 to 6 percent slopes
FrB	Fox-Boyer complex, 2 to 6 percent slopes
Gd	Gilford sandy loam, 0 to 2 percent slopes, gravelly subsoil
Ho	Houghton muck, 0 to 1 percent slopes
MoB	Wawasee loam, 2 to 6 percent slopes
MoC	Wawasee loam, 6 to 12 percent slopes
Pc	Pewamo clay loam
W	Water
Wc	Warners loam
Totals for Area of Interest	

ELSE: JOBS: 2020/20-290-WL/DWG/20-290 SITE SOILS INFO.DWG - P-9

SCALE: 1"=150'
JOB NO. 20-290

OWNER/DEVELOPER:
LAKE URBAN DEV, LLC
C/O WILSON & LINO
8273 S SAGINAW ST, GRAND BLANC, MI 48439
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PART OF SECTIONS 3 & 10
TYRONE TOWNSHIP, T4N-R6E
LIVINGSTON COUNTY, MICHIGAN

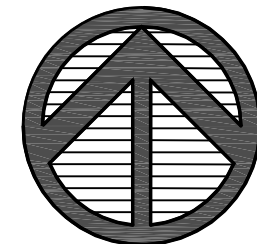


Fenton Land Surveying & Engineering, Inc
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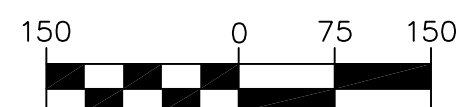
PRELIMINARY SOILS INFORMATION PLAN FOR:
LAKE URBAN CROSSINGS P.U.D. CONDOMINIUM
PART OF SECTIONS 3 & 10, T4N-R6E,
TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

PRELIMINARY REVIEW				
REVISIONS	DRN. BY:	J.R.B.	10.25.2021	SHEET NO:
	DSN BY:	J.R.B.	"	P-9
	CHK'D BY:	J.P.W.	"	
	APPR BY:	J.B.M.	"	

NORTH



GRAPHIC SCALE



(IN FEET)
1 inch = 150 ft.

PARALLEL SITE PLAN LAYOUT LAKE URBAN ESTATES

LEGEND

- PROPOSED HOMES
- EX WETLAND AREAS
- PROP DRAIN OUTLETS W/SEDIMENT BASINS
- PROP STORM SEWER
- PROP SANITARY MANHOLE
- PROP SANITARY SEWER LINE
- PROP LANDSCAPE TREES



WESTERLY SIDE FUTURE SITE INFORMATION:

ACCORDING TO THE CURRENT TYRONE TOWNSHIP FUTURE MASTER PLAN, THE WESTERLY HALF OF THIS PROPERTY (WEST OF PHASE LINE) IS TO BE ZONED R-2 (RURAL ESTATES), AND IS SUBJECT TO THE FOLLOWING CONDITIONS:

- 1) MINIMUM LOT SIZE = 21,780 SFT OR 0.50 ACRES
- 2) MINIMUM LOT WIDTH = 110 FEET
- 3) FRONT SETBACK = 50 FEET
- 4) SIDE SETBACK = 15 FEET, TOTAL = 30 FEET
- 5) REAR SETBACK = 35 FEET
- 6) MAXIMUM BUILDING HEIGHT = 30 FEET
- 7) MAXIMUM LOT COVERAGE = 30%
- 8) TOTAL NUMBER OF LOTS/UNITS = 52 UNITS
- 9) PUBLIC ROADS W/CONC CURB & GUTTER (66' R/W) = 5,045 FEET
- 10) ALL LOTS/UNITS WILL HAVE A PUBLIC SANITARY SEWER LEAD
- 11) PROPOSED 5' CONCRETE WALKS ALONG BOTH SIDES OF ROAD

NOTE: ALL THE HOMES IN THIS WEST PART MEET THE MINIMUM PROPERTY SETBACKS, AND ARE MINIMUM 2,000 SFT HOMES (40'x50' TYP), WITH 625 SFT ATTACHED GARAGES (25'x25' TYP) ON EACH OF THE 52 LOTS.

EASTERLY SIDE FUTURE SITE INFORMATION:

ACCORDING TO THE CURRENT TYRONE TOWNSHIP FUTURE MASTER PLAN, THE EASTERLY HALF OF THIS PROPERTY (EAST OF PHASE LINE) IS TO BE ZONED RE (RURAL ESTATES), AND IS SUBJECT TO THE FOLLOWING CONDITIONS:

- 1) MINIMUM LOT SIZE = 76,230 SFT OR 1.75 ACRES
- 2) MINIMUM LOT WIDTH = 200 FEET
- 3) FRONT SETBACK = 100 FEET *
* PRIVATE ROADS ALLOW FOR A 50 FOOT FRONT SETBACK (SEE TYRONE TWP SCHEDULE OF REGULATIONS, FOOTNOTE BB)
- 4) SIDE SETBACK = 20 FEET, TOTAL = 40 FEET
- 5) REAR SETBACK = 75 FEET
- 6) MAXIMUM BUILDING HEIGHT = 30 FEET
- 7) MAXIMUM LOT COVERAGE = 25%
- 8) TOTAL NUMBER OF LOTS/UNITS = 25 UNITS
- 9) PRIVATE ROADS W/DITCHES & CULVERTS (50' R/W) = 2,938 FEET
- 10) ALL LOTS/UNITS WILL HAVE A PUBLIC SANITARY SEWER LEAD
- 11) PROPOSED 5' CONCRETE WALKS ALONG BOTH SIDES OF ROAD

NOTE: ALL THE HOMES IN THIS EAST PART MEET THE MINIMUM PROPERTY SETBACKS, AND ARE MINIMUM 2,000 SFT HOMES (40'x50' TYP), WITH 625 SFT ATTACHED GARAGES (25'x25' TYP) ON EACH OF THE 25 LOTS.

THIS PARALLEL PLANS CONSISTS OF 77 NUMBERED LOTS/UNITS
77 x 15% INCREASE = 11.55 + 77 = 88.55 OR 88 UNITS IN PROPOSED P.U.D.

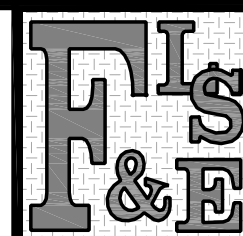
FILED: 2019/20-290-WL/DWG/20-290 PARALLEL SITE PLANDWG - P-10

SCALE: 1"=150'

JOB NO. 20-290

OWNER/DEVELOPER:
LAKE URBAN DEV, LLC
C/O WILSON & LINO
8273 S SAGINAW ST, GRAND BLANC, MI 48439
CONTACT: 810.244.6302

PART OF SECTIONS 3 & 10
TYRONE TOWNSHIP, T4N-R6E
LIVINGSTON COUNTY, MICHIGAN



Fenton Land Surveying & Engineering, Inc
14165 N. FENTON ROAD, SUITE 101A, FENTON, MI 48430
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PARALLEL SITE PLAN LAYOUT FOR:
LAKE URBAN ESTATES CONDOMINIUM
PART OF SECTIONS 3 & 10, T4N-R6E,
TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

REVISIONS	DRN. BY:	J.R.B.	06.10.2021	SHEET NO:
06.24.2021	DSN BY:	J.R.B.	"	P-10
10.22.2021	CHK'D BY:	J.P.W.	"	
	APPR BY:	J.B.M.	"	



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November 4, 2021

Preliminary Site Plan/Planned Unit Development Review for Tyrone Township, Michigan

PETITION INTRODUCTION

Applicant:	David McLane, AMAG LLC (agent)
Owner:	Lake Urban Crossings LLC
Project Name:	Lake Urban Crossings
Plan Date:	October 25, 2021
Request:	Review of Preliminary Site Plan/Planned Unit Development

PETITION DESCRIPTION

The applicant is requesting review and approval of a preliminary site plan/planned unit development for a residential site condominium in 2 phases. The proposed project calls for 88 single-family houses on a site of roughly 158 acres.

Residential planned unit developments may be approved as a special land use at this location. Because the project calls for dividing the properties as a site condominium, site plan approval is also required.

Review and approval takes places in two steps.

The Planning Commission first reviews the preliminary planned unit development and preliminary site plan. The focus of planned unit development review at this time is to determine compliance with criteria for planned unit developments, review the parallel plan, determine approved uses, and general approval of the design concept.

The focus of reviewing the site plan at this time is to review issues raised in consultant reviews, recommend changes for the final site plan, and determine initial compliance with site plan review standards.

The Planning Commission provides recommendation to the Township Board, which makes the ultimate decision.

Preliminary approval allows an applicant to submit a final planned unit development and site plan application. It does not vest any rights for approval of final plans.

Final approval may consider individual phases of a project or the whole project.

Planned unit developments are an optional development tool intended to encourage innovative site plan designs that provide a recognizable benefit for the users of the development and the community that might not otherwise be possible using conventional zoning. They allow the Township to modify developmental standards, such as setbacks or lot area. Planned unit developments are not intended as a method for avoiding ordinance standards.

For residential planned unit developments requesting more lots than would be allowed with a conventional development, a parallel plan showing how the property could be developed according to the zoning district consistent with the Future Land Use map must be provided.

This parallel plan is reviewed by the Planning Commission to determine if it would be feasible, and it serves as the basis for number of lots allowed in the final planned unit development. This project is requesting additional lots, so a parallel plan is required. The most recent parallel plan, Sheet P-10, is dated October 22, 2021.

The purpose of this review is to provide guidance and feedback to the Planning Commission as part of its preliminary review. It summarizes important decisions for the Planning Commission to make and provides some potential conditions for preliminary approval.

PROPERTY INFORMATION

Address:	n/a, Runyan Lake Road, White Lake Road
Location:	North side of White Lake Road, east of Runyan Lake Road, south of Hills of Tyrone West
Parcel Number:	04-03-300-001/020, 04-10-100-024/025, 04-10-200-025
Lot Area:	~158 acres
Frontage:	~70 feet along Runyan Lake Road ~1,835 along White Lake Road
Existing Land Use:	Undeveloped woodlands, wetlands, and water

Aerial of the Site



ZONING

The property is currently within the RE Rural Estate district.

The parallel plan should be prepared based on the zoning districts that correspond with the Future Land Use Map.

According to Table 11.1, the western portion of the site would be in either the R-1 Single Family Residential or R-2 Single Family Residential district. The eastern portion of the property would be located within the RE Rural Estate district. *(The Township Board recently adopted a zoning text amendment to make the corresponding districts in Table 11.1 consistent with what is outlined in the Master Plan.)*

The intents of those districts are below.

Zoning per Master Plan: **R-2 Single Family Residential**

western portion The intent of the R-2 district is the same as in the R-1 district, except that the district is intended for areas served with public sewer and water, or locations adjacent to urbanizing centers in which public sewer and water is expected in the foreseeable future. In order to preserve natural features and to provide design flexibility in the R-2 District, cluster development shall be permitted as described in Article 8.

Zoning per Master Plan: **RE Rural Estate**

eastern portion The intent of the RE Rural Estate District is to provide a transitional area between the FR District and other more intense land utilization districts. However, the RE District will generally maintain the same types of land uses permitted in the FR District. The primary difference between the two districts is that the RE District permits the creation

and use of smaller lots than the FR District. In order to preserve natural features and to provide design flexibility in the FR and RE Districts, cluster development shall be permitted as described in Article 8.

Current Zoning Map



Comments: For planned unit developments, the zoning district in which it is located becomes less important for developmental standards (lot area, setbacks, etc) because modified developmental standards could be approved for the project.

This project calls for modified standards for lot size, setbacks, and lot coverages. If approved, these modified developmental standards would become the standard for review/approval of future improvements within the project.

The underlying zoning district could have an impact on potential uses within the development. As a practical matter, however, most master deeds limit use to single-family residential uses.

FUTURE LAND USE MAP

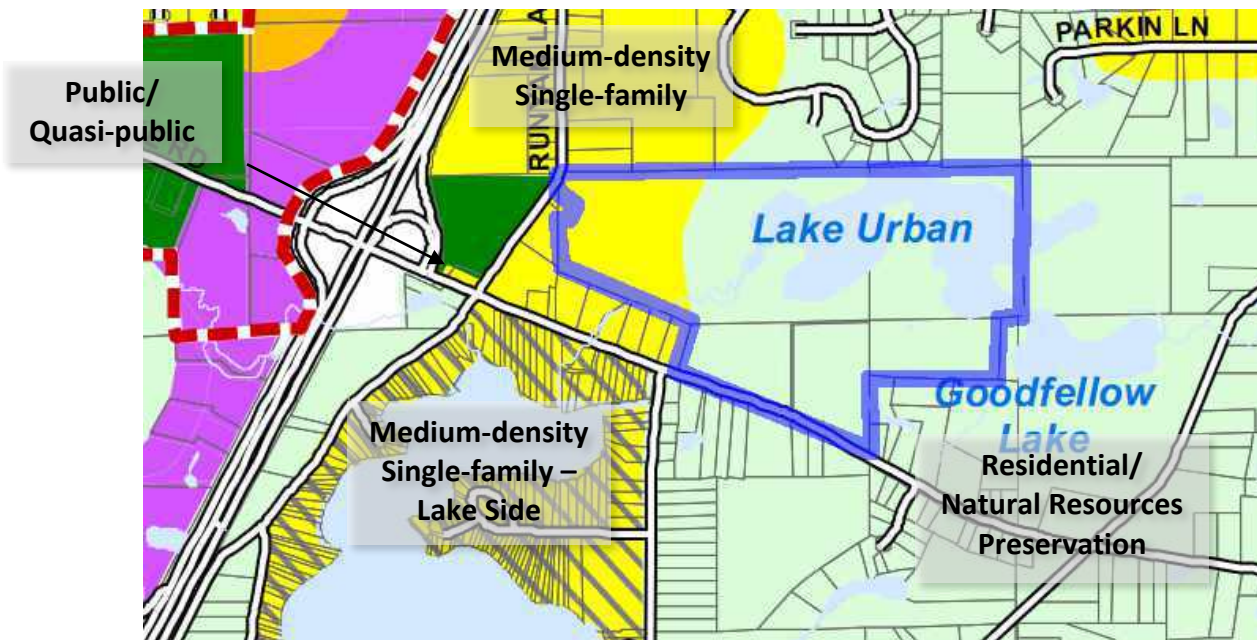
The western portion of the site is located within the Medium Density Single Family Detached Residential area. The eastern portion of the site is located within the Residential/Natural Resources Preservation area.

The boundary between these two areas cuts through the property, running roughly north and south from an interior property corner. At previous meetings, the Planning Commission said it was comfortable using the northern boundary of Urban Lake to demarcate the boundary, as it is common to use natural features as boundaries, and that practice has been used in other areas of the Future Land Use Map.

Future Land Use Map **Medium Density Single Family Detached Residential**
western portion This classification is intended to provide a transitional residential density between Low and High Density Residential. Lots will generally range from 0.5 acre to 1.5 acres per dwelling unit. This designation has been applied to land in and around existing residential subdivisions and near planned commercial areas. Medium density development should be encouraged to locate near areas that already have the infrastructure and amenities to support it.

Future Land Use Map **Residential/Natural Resource Preservation**
eastern portion As noted on the Opportunities and Constraints Map, Tyrone possesses a wealth of significant natural resources and features. These include woodlands, wetlands, natural water bodies, and areas with steep slopes and scenic vistas. The Future Land Use Plan's Residential/Natural Resource Preservation designation is located in areas that possess one or more of these significant natural features. It is intended to allow residential development at the very low density of a minimum of 3 acres per dwelling unit. Residential uses will be developed in a planned manner that preserves the attractive natural features of Tyrone Township.

Future Land Use Map



Comments: The boundary between the Medium-density Single-Family Residential and Residential/Natural Resources Preservation areas cuts through the property.

The boundary, as shown in the Future Land Use Map, is different from what was used to prepare the parallel plan. The parallel plan instead uses a boundary that follows the northern shore of Lake Urban. At an earlier meeting, the Planning Commission determined that the use of the natural feature as the boundary would be appropriate.

NATURAL RESOURCES

- Topography:** Due to the size of the property, there are a variety of topographies present.
- Waterbodies:** A significant portion of the site consists of Lake Urban. Additionally, Denton Creek flows through the site, connecting Lake Urban and Runyan Lake.
- Wetlands:** There are significant wetland areas within the site that are adjacent and connected to Denton Creek and Lake Urban.
- Woodland:** A significant portion of the site that is not a waterbody is currently woodlands.
- Soils:** The site has a variety of soils, ranging from loamy sands to clay loam to muck.

Comments: *Both the parallel plan and proposed planned unit development plan require some filling of identified wetland areas. Because the wetlands on the site are considered state-regulated wetlands, filling would require issuance of permits from the Michigan Department of Environment, Great Lakes, and Energy.*

Soils on some lots may require greater engineering for construction of structures, such as helical piers. Review of construction details is typically done during zoning/building permit review.

AREA, WIDTH, HEIGHT, & SETBACKS

Residential developments must be planned to meet the developmental standards for the zoning district in which it is located.

For planned unit developments, however, an applicant can propose modifications from developmental standards. If approved, those modified developmental standards would become the developmental standards for the project

The standards for the current zoning district, the zoning districts corresponding with the Future Land Use Map, and the proposed standards for the planned unit development are outlined below.

Developmental Standards

	RE Rural Estate current	R-2 Single Family western portion per Master Plan	RE Rural Estate eastern portion per Master Plan	Proposed PUD	Complies
Lot Area (min)	1.75 acres	21,780 sf	1.75 acres	21,870 sf (phase 1) 18,000 sf (phase 2)	Yes
<i>Parallel Plan -></i>		<i>21,794 sf</i>	<i>1.75 acres</i>		Yes
Lot Width (min)	200 feet	110 feet	200 feet	90 feet	Yes
<i>Parallel Plan -></i>		<i>110 feet</i>	<i>200 feet</i>		Yes
Lot Coverage (max)	25 percent	30 percent	25 percent	35 percent	Likely
Setbacks					
Front	100 feet	50 feet	50/100 feet	35/50 feet	Yes
<i>Parallel Plan -></i>		<i>50 feet</i>	<i>50/100 feet</i>		Yes
Side	20 feet	15 feet	20 feet	15 feet	Yes
<i>Parallel Plan -></i>		<i>15 feet</i>	<i>20 feet</i>		Yes
Rear	75 feet	35 feet	75 feet	35 feet	Yes
<i>Parallel Plan -></i>		<i>35 feet</i>	<i>75 feet</i>		Yes
Natural Features	50 feet	50 feet	50 feet	50 feet	Yes
<i>Parallel Plan -></i>		<i>50 feet</i>	<i>50 feet</i>		Yes

Comments: *The proposed lots in the parallel appear to meet, or could with some minor adjustments, the developmental standards for the R-2 Single Family Residential district in the northwestern portion of the site and the RE Rural Estate district in the southeastern portion of the site.*

The proposed lots in the planned unit development appear to be consistent with the proposed developmental standards for the planned unit development. Lot coverage on individual lots would be reviewed as part of zoning permit review.

ACCESS & CIRCULATION

The parallel plan shows 1 access point from Runyan Lake Road to the west for the western/northern portion of the development and 1 access point from White Lake Road to the south for the eastern/southern portion of the development. Additionally, 2 lots would have direct access from White Lake Road.

The proposed planned unit development would have access from Runyan Lake Road to the west and from White Lake Road from the south. The Runyan Lake Road access will serve the northern/western portion with 42 lots. The White Lake access will serve the southern/eastern portion with 44 lots. Two lots will have direct access from White Lake Road with a shared driveway.

As noted in §11.02(E) Access, planned unit developments “shall be located so that it can be accessed from a paved County primary road able to safely serve the proposed development without adverse impact on the community.”

While it has been offered that the above standard requires planned unit developments to only have direct access from a paved county primary road, the plain language used here and the language used in other sections of the Zoning Ordinance offer different guidance.

The definition section states that “shall” is always mandatory and not discretionary. “Can” is not defined in the ordinance, but its common meaning is “to be able to” or “to be permitted to.” Based on the plain language, a planned unit development must be located so it is able to have access from a paved county road.

Developmental standards for other uses provide different guidance. For example, cemeteries and open storage yard must have “direct access” to certain types of roads. Churches, colleges, golf courses, and contractors limited storage have some variation of “all access shall be directly to” certain types of roads.

It is our interpretation that the location of the proposed planned unit development is consistent with the access standard, as it is written in the Zoning Ordinance.

The access point for each phase has a boulevard or partial boulevard and will provide access to more than 30 but less than 50 dwelling units. In general, private roads with a single point of access are limited to 30 dwelling units. Boulevard entrances have previously been considered as providing multiple access points. Additionally, planned unit developments may have up to 50 dwelling units with a single access point.

Based on the number of proposed units and likely trip generation, a traffic impact statement, as described in Table 23.1 Requirements for Various Types of Traffic Impact Studies, will be required as part of final approval. Some basic information has been provided by the applicant by email.

The site plan calls for the internal roads to be public roads, dedicated to the Livingston County Road Commission. It appears that the proposed internal roads are generally consistent with the design standards, but we defer further comment to the Township Engineer.

Items to be Addressed: 1) We recommend the cul-de-sacs should be reconfigured so the center area is landscaped rather than paved. 2) The eastern end of Valencia will likely need to be reconfigured to provide a large-vehicle turnaround. 3) Before final site plan application, the applicant should secure the necessary permits from the Livingston County Road Commission. 4) Approval of the access and circulation by the Township Engineer and Fire Inspector.

ESSENTIAL SERVICES

The proposed planned unit development will be served by public sanitary sewer.

Except where otherwise noted, the utilities will generally be buried within the street rights-of-way. Potential locations for above ground utility boxes are not shown at this time.

It is our understanding that the site has enough sewer taps available and that there would be adequate capacity to provide sewer service for the proposed number of lots.

The preliminary plan shows the approximate location of stormwater management improvements. In general, stormwater will be pretreated in a detention basin or other structure to remove sediment and pollutants and to manage flow rate before discharge into onsite wetlands.

Items to be Addressed: 1) The applicant should provide confirmation of capacity as part of final site plan submission. 2) The applicant should provide information about required permits from Livingston County and the Michigan Department of Environment, Great Lakes, and Energy at final site plan submission. 3) Calculations and details for stormwater management should be included in the final site plan. 4) The applicant should consult with the Post Master to determine if shared mailboxes will be required and include locations and details in the final site plan.

LANDSCAPING & SCREENING

A landscaping plan is included on Sheet P-6.

It calls for planting 4 species of trees, including Austrian pine, blue spruce, American sweetgum, and black maple. Roughly 34 trees will be planted along White Lake Road, 43 trees along the northern lot line of the northern/western portion, and 16 along adjacent residential properties to the southwest.

We recommend that the applicant consider some changes to or additions to the proposed species, which could be included in the final site plan. Blue spruce are susceptible to disease. Other trees may be better suited for areas with wet soils, such as Douglas fir, balsam fir, and red maple.

Calculations used to determine the number of trees and description of location for specific trees are not included at this time, but preliminary site plan is intended to review if there is space available for landscaping with details tended to at final site plan.

The location of some of the proposed trees may have to be adjusted to accommodate clear-vision areas at the intersections and the shared private driveway for lots 87 and 88.

Items to be Addressed: 1) Applicant should consider changes or additions to proposed tree species. 2) Calculations, number of each specie, and identification of trees should be added to the final site plan. 3) Clear-vision areas, as defined in §21.39 of the Zoning Ordinance, should be added to the final site plan.

LIGHTING

The site plan does not appear to show the location of or any details of any proposed outdoor lighting.

The Township may require street lighting for planned unit developments. At an earlier meeting, the applicant has stated they would be willing to install street lights and the location for street lights are shown on Sheet P-2.

Items to be Addressed: 1) The Planning Commission should determine if street lights will be required. 2) The location and details of existing and proposed outdoor lighting should be added to the final site plan, or a note should be added that there will be no exterior lighting.

OUTDOOR ADVERTISING & SIGNS

The preliminary site plan does not indicate whether or not there will be any signs near the entrances at Runyan Lake or White Lake Road.

Items to be Addressed: The location and details of any signs should be added to the final site plan, or the applicant should confirm that no signs will be added.

PLANNED UNIT DEVELOPMENT GENERAL REQUIREMENTS

§11.02 General Requirements provides minimum standards that all planned unit developments must comply with. Below is a review of those general requirements. In some cases, the requirement may have its own section of this report.

A. Location. A PUD may be approved at any location in the Township as a special use as specified in Table 11.1 and further subject to review and approval as provided herein.

Comments: The proposed planned unit development is a special land use at the proposed location.

B. Ownership. At the time of Preliminary PUD approval, the proposed development shall be under single ownership or control such that there is a single person or entity having responsibility for the development of the project. This provision shall not prohibit a transfer of ownership or control of separate parcels or phases following approval of the Preliminary PUD, however all phases and parcels shall continue to be subject to the approved Preliminary PUD plan and all of its terms and conditions.

Comments: It is our understanding that the proposed planned unit development is under single ownership or control at this time.

C. Minimum Area. The minimum area required for a PUD shall not be less than 20 contiguous acres of land...

Comments: The properties that are a part of the proposed planned unit development are significantly greater than 20 acres and are all contiguous.

D. Utilities. The PUD shall be located at a site that is able to provide adequate water and wastewater disposal service to the proposed development without adversely impacting the community and surrounding neighbors.

Comments: *If lots within the proposed project would be served by individual wells, Livingston County Health Department would require several test wells on the site (tests are typically done between preliminary and final site plans) and would require permits for each individual well.*

The project will be served by a public sanitary sewer system.

- E. Access. The PUD shall be located so that it can be accessed from a paved, County primary road able to safely serve the proposed development without adverse impact on the community.

Comments: *As noted in the "Access and Circulation" section of this report, it is our interpretation that the location of the proposed planned unit development is consistent with the access standard, as it is written in the Zoning Ordinance.*

The proposed planned unit development would have access for 42 units from White Lake Road, less than the 52 units that would have access in the parallel plan, which is likely to reduce any adverse impacts on the use of that road.

A traffic impact statement, required as part of final site plan review, will provide more details about anticipated trip generation and distribution. The Planning Commission could also require a traffic impact study as part of preliminary review if it determines such a study is essential for review of the planned unit development at this phase.

- F. Uses. The following uses may be permitted in PUDs...

Comments: *The proposed planned unit development will only have single-family residential uses, which is a permitted use in the current zoning district and the zoning districts consistent with the Future Land Use Map.*

- G. Residential Density / Parallel Plan. To assist the Planning Commission in determining the number of lots, units, or square footage permitted in a residential PUD or the residential component of a PUD, the applicant shall submit a parallel plan (see also Sections 11.04.B and 11.06.A.4) for the development. The parallel plan shall comply with the requirements for a site plan in Section 23.02, and shall show how the site could be reasonably developed in compliance with adopted zoning and subdivision ordinances and standards. The parallel plan should be drawn to contain the maximum number of lots or dwelling units allowable and reasonable per the dimensional and other Ordinance standards and practical engineering limitations that would apply to the site if zoned in accordance with the site's future land use designation (see Table 11.1). The Planning Commission shall review the parallel plan and determine the number of lots or dwelling units that could be constructed (based on adopted ordinances and standards, site conditions, engineering, cost and similar factors). For example, parallel plans showing lots with dwellings on extremely steep slopes, in bodies of water, or in a right-of-way will have these lots rejected, as they are not reasonable and do not meet ordinance requirements. This number, as recommended by the Planning Commission and approved by the Township Board, will be the base number of dwelling units allowable for the residential PUD. Any density bonus (see Section 11.02.H) granted by the Township Board will be applied to this base number. For residential PUDs which do not request a density bonus, the parallel plan requirement may be waived, subject to the determination of the Planning Commission.

Comments: *The proposed planned unit development is requesting a residential density bonus, so a parallel plan is required.*

The proposed lots in the parallel plan appear to meet, or could meet with minor adjustments, the developmental standards for lots within the corresponding zoning districts. The parallel plan shows building envelopes with attached garage that are larger than the minimum required square footage for dwellings.

- H. Residential Density Bonus. The number of units permitted in a residential PUD or the residential component of a PUD, as determined from the parallel plan may be increased at the discretion of the Planning Commission and the Township Board, in accordance with the following:
1. Each element listed in Section 11.02.H.2 below, is worth an additional, incremental bonus. The bonus for each element may range from 0% to 5% of the units identified on the parallel plan. The specific amount of the bonus shall depend on the degree to which the PUD has addressed that element and the impact the element has in contributing to the objectives sought to be achieved by the PUD. The maximum density increase any development may receive shall be 15% of the residential units identified on the parallel plan.
 2. For those residential PUDs eligible to receive a density bonus, the proposed development is required to meet or exceed one or more of the requirements of this section of the Ordinance.
 - a. Providing clustered development where a minimum of fifty percent (50%) of the gross land area of the development is protected open space.
 - b. Inclusion of a variety of building types, quality architecture, durable materials and superior site design.
 - c. Providing frontage transition areas along all public roads that are at least one hundred fifty (150) feet in depth with suitable landscaping.
 - d. Providing public amenities such as trails for non-motorized use, children’s playgrounds, picnic facilities, or community centers.
 - e. Providing paths, trails, greenways, or other pedestrian and nonmotorized transportation facilities, accessible to the public, and connected to or creating a network of trails throughout the community.
 - f. Cleanup of site contamination.
 - g. On-site storm water management that relies upon natural systems to the greatest extent possible and preserves the quality and integrity of such systems.
 - h. Other similar elements as determined by the Planning Commission.

Comments: *The proposed planned unit development is requesting a residential density bonus, so a parallel plan is required.*

Based on comments from the applicant, it is our understanding that they are requesting additional lots for items b (superior architecture/design), d (non-motorized trails), and g (stormwater management with natural features).

The Planning Commission should determine if it believes the elements are satisfied and, if so, what incremental bonus from 0% to 5% the planned unit development qualifies for.

- I. Development Standards and Flexibility. The purpose of this Section is to ensure that PUDs are compatible with adjacent properties and the Township. All development standards of this Ordinance

and the requirements of the zoning district corresponding to the site’s future land use designation (see Table 11.1) shall be followed in the design of PUDs. However, modifications to any of these standards may be approved as part of a Preliminary PUD plan provided that such modifications are determined by the Township Board to be consistent with the purpose and intent of this Article, are consistent with sound planning and design, are necessary for the preservation of significant features or open space on the site, or are otherwise necessary to result in a higher quality design.

Comments: *The proposed planned unit development is proposing modification of several district standards, as noted in the table below.*

Current and Proposed Developmental Standards

	RE Rural Estate current	R-2 Single Family western portion per Master Plan	RE Rural Estate eastern portion per Master Plan	Proposed PUD Standards
Lot Area (min)	1.75 acres	21,780 sf	1.75 acres	21,870 sf (phase 1) 18,000 sf (phase 2)
Lot Width (min)	200 feet	110 feet	200 feet	90 feet
Lot Coverage (max)	25 percent	30 percent	25 percent	35 percent
Front	100 feet	50 feet	50/100 feet	35/50 feet
Side	20 feet	15 feet	20 feet	15 feet
Rear	75 feet	35 feet	75 feet	35 feet

The proposed modification of minimum lot area and width would allow for more area to be included within open space. Including wetland areas within common open space areas tends to provide greater protection than if wetland areas are within individual lots. The associated modifications to setbacks and lot coverage are likely necessary to develop lots with typical dwellings on the proposed lots.

A table should be added to the preliminary plan listing the proposed developmental modifications requested as part of the planned unit development, the specific section of the Zoning Ordinance, and the reasons and mechanisms used to protect the public health, safety, and welfare in place of the original standards.

- J. Phasing. Where a project is proposed for construction in phases, the project shall be so designed that each phase, when completed, shall be capable of standing on its own in terms of services and facilities, and shall contain the necessary components to ensure protection of natural resources and the health, safety, and welfare of the users of the planned unit development and residents of the community. A phase shall not be substantially dependent upon subsequent phases for safe and convenient vehicular and pedestrian access.

Comments: As noted in Phasing Schedule and Timeline on Sheet P-1, the project is proposed for construction in 2 phases. Phase 1 would include lots 1-42 and would begin in spring 2022. Phase 2 would begin in spring 2024.

Each phase is generally able to stand on its own. Some utility improvements to support Phase 2 are located within the boundaries of Phase 1 and should be completed while those improvements are being made.

Walking trails within the open spaces of Phase 2 should be completed as part of Phase 1 or a performance guarantee adequate to cover costs of construction should be provided to the Township.

K. Open Space. 1. Residential. PUDs containing a residential component shall provide and maintain open space at a minimum of 30 percent of the total land area of the portion of the site that is designated for residential use. However, the Planning Commission may recommend, and the Township Board may approve, modifications of the 30 percent requirement if it finds that the site characteristics, surrounding natural features, and proposed design features and uses lend themselves to different open space area requirements. For residential uses, open space shall conform to the requirements of Section 21.51 of this Ordinance, however up to 50% of the area of storm water basins which utilize best management practices to provide for an aesthetic site amenity may be considered to be open space, at the discretion of the Planning Commission and Township Board based on review of the specific solution.

Comments: Unfortunately, the Zoning Ordinance does not define "total land area." The calculations provided by the applicant for 156.54 acres is consistent with the definition for net lot area, excluding rights-of-way. Without further guidance from the Zoning Ordinance, this number appears appropriate to use, provided that rights-of-way for the adjacent public streets are excluded and the rights-of-way for the internal, proposed streets are included.

A minimum of 30% of the total land area must be provided as open space, which would be 46.96 acres. A maximum of 25% (11.74 acres) can come from submerged lands. A maximum of 35% (16.43 acres) can come from wetlands. The rest of the open space would need to be upland.

The calculations on Sheet P-5 states the open space would include 49.34 acres of submerged land/open water, 24.95 acres of state-regulated wetland, and 15.44 acres of upland. Based on the limitations above, the submerged lands and wetlands would be allowed to contribute a maximum of 28.17 acres. With the upland, a total of 43.61 acres of open space would be provided, according to the Zoning Ordinance, roughly 3.35 acres short of the required open space. (The calculations on Sheet P-5 incorrectly limit upland to 40% of the required open space, but there is no limit on upland contribution.)

It is not clear if the calculations for open space include storm water basins. This should be noted on the site plan.

The Township may approve for non-contiguous open space, as outlined in §11.02(K)(3)f. The non-contiguous space would have to be located within Tyrone Township and would have to be protected in perpetuity with a recorded instrument. We are unaware if the applicant has investigated securing open space outside of the proposed planned unit development.

The Township may modify the 30% open space area requirement if it finds that the site characteristics, surrounding natural features, and proposed design features lend themselves to different open space requirements.

We recommend the applicant examine securing non-contiguous open space before the Township consider reducing the open space area requirement.

- L. Emergency Access. The configuration of buildings, driveways, and other improvements shall permit convenient and direct emergency vehicle access. A PUD in excess of 50 dwelling units and/or 500 average daily vehicle trips shall, at the discretion of the Township Board, provide at a minimum of two points of ingress and egress.

Comments: *The proposed road system would allow direct access to all of the proposed lots. Sheet P-8 shows fire apparatus access through most of the site. It is likely that a turnaround will be required at the eastern end of Valencia.*

Lots 87 and 88 will have direct access from White Lake through a shared private driveway.

The planned unit development will have more than 50 dwelling units, but no access point will provide access for more than 50 dwelling units. Additionally, the access points for the roads serving each phase will have a full or partial boulevard segment.

We defer further comment to the Township Engineer and Fire Inspector.

- M. Site Circulation. The vehicular and pedestrian circulation system within each development shall accommodate, where appropriate, the movement of vehicles, bicycles, and pedestrians throughout the proposed development and to and from surrounding areas in a safe and convenient manner. Sidewalks and streets shall be connected into the overall Township network and shall be extended to adjacent undeveloped properties to provide future connections. Any improvements, if necessary, shall be at the applicant's expense. Private roads shall comply with the standards in Article 24. PUDs must also satisfy the Access Management Standards in Section 21.54.

Comments: *The planned unit development would include a vehicular access system to provide primary access to most of the lots. It appears that the proposed geometry, except as noted otherwise, appears to be consistent with the applicable standards and would allow access by fire apparatus (and school buses and garbage trucks). The proposed road system is not designed to connect with adjacent properties, but most of the adjacent properties are already developed or connections would be limited due to wetlands or water.*

The planned unit development would include a separate pedestrian circulation system, with sidewalks along the proposed streets and a variety of pathways to and within open space. There is also a proposed pedestrian connection spanning the river that divides the 2 phases.

- N. Streets. All public and private streets within a PUD shall comply with the applicable standards of the Livingston County Road Commission and Tyrone Township.

Comments: *It appears that the proposed streets within the planned unit development would comply with the applicable standards. We note that a large vehicle turnaround of some type is likely necessary for the eastern end of Valencia.*

We defer further comment to the Township Engineer and the Livingston County Road Commission.

- O. Infrastructure Improvements. All infrastructure improvements, including roads, water, wastewater, storm water drainage, street lights, and street signage, within and adjacent to the PUD and necessary to serve the site, shall be provided by the developer as a part of the development of the site. All such infrastructure shall be subject to the approval and meet the requirements of the Fire Department and all other agencies with authority.

Comments: *Details and approvals for the various responsible agencies above are typically obtained following preliminary approval. Any final approval should be conditioned on receiving those approvals and providing a performance guarantee to ensure installation of any infrastructure improvements.*

- P. Availability and Capacity of Public Services. The proposed type and intensity of use shall not exceed the existing or planned capacity of existing public services and facilities, including police and fire protection, traffic capacity of the public roads, drainage and storm water management facilities, and capacity of existing or planned water and sanitary sewer facilities. The expansion or provision of public services shall not create an unreasonable burden on the Township. Approval of the appropriate County agencies, other agencies with authority, Fire Department and the Township Engineer shall be required for all facilities necessary for the development.

Comments: *It is our understanding that the proposed single-family residential use and proposed number of units would not exceed the existing or planned capacity for public services. Addition information about traffic would be required as part of final site plan approval.*

We defer further comment to the applicable agencies.

- Q. Utilities. All utilities except electrical transmission lines constructed or relocated within the site, including: electrical service lines, appurtenances and accessories, shall be placed underground. Any utility pad or transformer, where required to be placed above ground because of size or function, shall be fully screened or obscured by mature landscaping and/or a decorative masonry wall, or may be fully enclosed in a dedicated building constructed consistent with these regulations.

Comments: *The planned unit development calls for burying utilities throughout the project. Specific locations and easements are typically described as part of final site plan review. It appears that there is adequate space for utilities within the proposed rights-of-way and existing easements.*

- R. Landscaping. Landscaping, screening and buffering shall be required. A landscaping plan shall be submitted with both the Preliminary and Final PUD plans consistent with the requirements in Article 21A.

Comments: *A landscaping plan has been submitted as Sheet P-6. It shows the rough location of proposed plantings and the types of trees to be planted.*

The applicant should consider changes or additions to proposed tree species. Calculations, number of each specie, and identification of trees should be added to the final site plan. Clear-vision areas, as defined in §21.39 of the Zoning Ordinance, should be added to the final site plan

The plan generally demonstrates that it is possible to provide landscaping

- S. Parking and Loading. Parking and loading facilities in a PUD shall comply with the standards in Article 25. However, the numerical requirements for parking may be modified, based on evidence that other standards would be more reasonable because of the level of current or future employment, the level of current or future customer traffic, shared parking by uses that have peak parking demands that do not overlap, and other considerations. A decision to reduce the number of parking spaces shall be based on technical information provided by a qualified planning, parking or traffic consultant, that verifies that the reduction will not impair the functioning of the developments served, or have an adverse impact on traffic flow on or adjacent to the development.

Comments: *Parking for the proposed single-family houses would be provided on each lot, on the driveways or within the garages.*

- T. Conditions of Construction. The hours of construction activity shall be stated on the PUD plan and shall be determined based on the scale and schedule of construction, and proximity to and type of adjacent developments. Noise, dust, odors, traffic and other impacts of construction of the PUD shall be limited so as to not create negative impacts for the Township or surrounding area. The applicant shall present a plan for review that includes specific measures to ensure that construction operations do not create nuisance conditions. The Township Board may place reasonable limitations on hours and other construction activities to prevent potential negative impacts.

Comments: *Hours of construction and nuisance mitigation measures should be added to the final site plan.*

PARALLEL PLAN REVIEW

The Parallel Plan review process, noted below, is outlined in §11.02(G) Residential Density/Parallel Plan.

To assist the Planning Commission in determining the number of lots, units, or square footage permitted in a residential PUD or the residential component of a PUD, the applicant shall submit a parallel plan (see also Sections 11.04.B and 11.06.A.4) for the development. The parallel plan shall comply with the requirements for a site plan in Section 23.02, and shall show how the site could be reasonably developed in compliance with adopted zoning and subdivision ordinances and standards. The parallel plan should be drawn to contain the maximum number of lots or dwelling units allowable and reasonable per the dimensional and other Ordinance standards and practical engineering limitations that would apply to the site if zoned in accordance with the site's future land use designation (see Table 11.1).

The Planning Commission shall review the parallel plan and determine the number of lots or dwelling units that could be constructed (based on adopted ordinances and standards, site conditions, engineering, cost and similar factors). For example, parallel plans showing lots with

dwelling units on extremely steep slopes, in bodies of water, or in a right-of-way will have these lots rejected, as they are not reasonable and do not meet ordinance requirements. This number, as recommended by the Planning Commission and approved by the Township Board, will be the base number of dwelling units allowable for the residential PUD. Any density bonus (see Section 11.02.H) granted by the Township Board will be applied to this base number. For residential PUDs which do not request a density bonus, the parallel plan requirement may be waived, subject to the determination of the Planning Commission.

Comments: *The proposed residential planned unit development would include additional lots, so review and approval of a parallel plan is required. A parallel plan, dated October 22, 2021, is included as Sheet P-10.*

The parallel plan shows lots that could be developed using the standards for the zoning districts that are consistent with the Future Land Use Map.

This parallel plan includes building footprints, showing the potential location for houses on each of the lots.

The lots appear to be generally feasible or could be feasible with minor adjustments; none of the lots call for dwellings on extremely steep slopes, in bodies of water, or within rights-of-way.

It appears that all of the lots would meet the lot area and width standards. The proposed house locations appear to meet the setback standards, and it appears that the lot coverage standards would be met.

APPLICABLE DECISION CRITERIA

The proposed planned unit development requires site plan, special land use, and planned unit development review. The decision criteria for those approvals are examined below.

Standards for site plan review are outlined in §23.03 Standards for Site Plan Review, and a description of information that must be included in a site plan is outlined in §23.02 Site Plan Information. Comments addressing these standards are included throughout this report and below.

A. Required Information. That all required information has been provided.

Comments: *The site plan is generally complete for preliminary review, except as otherwise noted, or may be eligible for waivers. At this time the applicant has submitted elements of but not a completed impact statement, as outlined in §23.04 Requirements for Impact Statement. At this time, the applicant has submitted elements of but not a complete traffic impact statement, as outlined in §23.05 Traffic Impact.*

The plans are drawn at a scale of 1" = 150'. Any scale greater than 1" = 100' requires Planning Commission waiver upon determination that the requirement is clearly unnecessary for substantial review.

B. Zoning District Conformity. That the proposed development conforms to all regulations of the zoning district in which it is located.

Comments: *The proposed planned unit development appears to conform with the regulations for the RE Rural Estate district or with modifications proposed as part of the planned unit development.*

- C. Legal Applicant. That the applicant may legally apply for site plan review, including authorization from the owner.

Comments: *To the best of our knowledge, the applicant is legally authorized to apply for site plan review.*

- D. Infrastructure. That the plan meets the specifications of Tyrone Township for fire and police protection, water supply, sewage disposal or treatment, storm drainage, and other public facilities and services, and has been approved by the Township's designated Fire Marshal and/or professional consultants where appropriate.

Comments: *It is our understanding that full review by the listed agencies has not been completed at this time. Typically, these reviews are completed between preliminary and final review or as a condition of final approval.*

- E. Suitable Soils. That soils not suited to development will be protected or altered in an acceptable manner.

Comments: *The soils that are less suitable for development are generally located within open spaces and will not be developed.*

- F. Soil Erosion. That the proposed development will not cause soil erosion or sedimentation problems.

Comments: *The proposed planned unit development does not appear likely to cause soil erosion or sedimentation problems following construction. During construction, soil erosion and sedimentation control measures will be required to prevent erosion and sedimentation.*

- G. Floodplains. That the proposed development properly respects floodways and/or floodplains on or in the vicinity of the subject property.

Comments: *The proposed planned unit development is not located within a floodway or floodplain. However, the open water will be located within open space with limited development in the immediate vicinity.*

- H. Drainage. That the drainage plan for the proposed development is adequate to handle anticipated storm water runoff and will not cause runoff onto neighboring property or overloading of water courses in the area.

Comments: *The preliminary site plan shows the location for some stormwater management improvements, including swales and detention basins. Calculations for sizing of these improvements is typically included as part of final site plan review. The stormwater will eventually be discharged into wetland areas and then flow downstream. Typically, discharge permits require stormwater management to discharge at the same rate as before the property was developed.*

We defer additional comment to the Township Engineer.

- I. Coordinated Improvements. That the proposed development is coordinated with improvements serving the subject property and with the other development in the general vicinity.

Comments: *We are not aware of any improvements in the general vicinity that would require coordination with the proposed planned unit development.*

- J. Site Lighting. That outside lighting will not adversely affect adjacent or neighboring properties or traffic on adjacent streets (see Section 21.37) and that adequate lighting will be provided as determined appropriate by the Planning Commission upon the advice of the Township expert to protect the public health, safety and welfare.

Comments: *The preliminary site plan includes interior street lighting. Specific details of the lighting and a photometric plan have not been provided at this time. The proposed locations are not likely to cause significant negative impact on adjacent properties or streets, as they will be screened by structures and landscaping. Additional information should be provided as part of final site plan review.*

- K. Garbage and Refuse. That outdoor storage of garbage and refuse is contained, screened from view, and located so as not to be a nuisance to the subject property or neighboring properties.

Comments: *It is our understanding that garbage would be stored and collected using individual bins, typical for residential developments.*

- L. Grading or Filling. That grading or filling will not destroy the character of the property or the surrounding area and will not adversely affect the adjacent or neighboring properties.

Comments: *The preliminary plan for the proposed planned unit development shows the limits of disturbed areas on Sheet P-7. This area will include some grading and filling adjacent to neighboring properties, but it is not clear that the proposed work would create a negative impact.*

We defer further comment to the Township Engineer.

- M. Traffic. That vehicular and pedestrian traffic within the site as well as to and from the site is both convenient and safe and includes berms, barriers, and sidewalks necessary to protect adjacent property from vehicle lights.

Comments: *The applicant has not provided a complete traffic impact statement at this time, but the proposed planned unit development is likely to provide a better distribution of traffic than a conventional development. Internally, the site provides streets and vehicular circulation that appears to be convenient and safe. Because adjacent dwellings are not currently shown on the preliminary site plan, it is difficult to determine if any additional screening might be necessary to protect them from vehicle lights.*

We defer further comment to the Township Engineer and Livingston County Road Commission.

- N. Parking. That parking layout will not adversely affect the flow of traffic within the site or to and from the adjacent streets and adjacent properties.

Comments: *The proposed planned unit development does not include any parking areas, beyond residential driveways.*

O. Governmental Agencies. That the plan meets the standards of other government agencies, where applicable, and that the approval of these agencies has been obtained or is assured.

Comments: *The applicant has provided a review from the Livingston County Road Commission. We are not aware of other reviews or approvals from other agencies. Typically, these reviews are completed between preliminary and final review or as a condition of final approval.*

P. Public Streets. That the plan provides for the proper expansion of existing public streets serving the site, where applicable.

Comments: *We are unaware of requirements for expansion of existing public streets and defer further comment to the Livingston County Road Commission.*

Q. Phased Development. That all phased developments are ordered in a logical sequence so that any individual phase will not depend in any way upon a subsequent phase for adequate access, public utility services, drainage or erosion control.

Comments: *The proposed planned unit development will take place in 2 phases. Phase 1 does not appear to require any improvements from Phase 2 in order to function; there are some improvements to open space that are shown in Phase 2 that should be completed as part of Phase 1 or a performance guarantee should be provided.*

R. Landscaping. The Planning Commission and/or Township Board may further require landscaping, fences and walls in pursuance of these objectives and shall be provided and maintained in accord with any use to which they are appurtenant.

Comments: *The preliminary site plan shows potential landscaping that appears to be generally consistent with the Zoning Ordinance standards. Notes for improvements to the landscaping are included in the "Landscaping & Screening" section of this report.*

S. Screening. The Planning Commission shall have some latitude in specifying the walls, fences, greenbelts as they apply to a phased development if the particular phase of development and construction work is far enough removed from adjacent properties to afford the screening, etc., as otherwise required.

Comments: *The proposed planned unit includes screening along White Lake Road and along adjacent residential properties where lots are proposed. The Planning Commission should provide guidance to the applicant if alternative screening is desired.*

T. Sound Planning. The proposed site plan must be in accord with the spirit and purpose of this ordinance and not be inconsistent with or contrary to the objectives sought to be accomplished by this ordinance and principles of sound planning.

Comments: *The proposed planned unit development is located on a challenging property. It appears to preserve greater natural areas than a conventional development would and provides greater pedestrian circulation than a typical development. It would provide a better distribution of traffic between the adjacent streets and would support connection with a sanitary sewer system. Ideally, it would include vehicular and pedestrian connections with adjacent properties and developments and a greater variety of housing options, but the surrounding properties are already developed and the Zoning Ordinance does not require a mix of housing options.*

U. Developmental Impacts. Plans shall provide sufficient information, text, detail and/or other assurances necessary to satisfy the Planning Commission and Township Board that areas required to be protected from the impacts of the development (such as topsoil, trees, and other natural features) have been properly designated on the plans, and that these areas have been properly protected, in accordance with Section 21.A.8 before commencement of any building, operations, or development.

Comments: *The proposed planned unit development includes areas that would be preserved in their natural state or with little disturbance. Sheet P-7 shows the limits of disturbed areas.*

V. Natural Watercourses. The development will not substantially reduce the natural retention storage capacity of any watercourse, thereby increasing the magnitude and volume of flood at other locations.

Comments: *It does not appear that the proposed planned unit development will substantially reduce the natural retention storage capacity of a watercourse because the watercourse and adjacent wetlands are generally located within open space and will generally be preserved in their natural state.*

We defer further comment to the Township Engineer.

W. Conditions for Excavation. The soil and subsoil conditions are suitable for excavation and site preparation and the drainage is designed to prevent erosion and environmentally deleterious surface runoff.

Comments: *We defer comment to the Township Engineer.*

X. Natural Features. The development will not detrimentally affect or destroy natural features such as ponds, streams, wetland, hillsides or wooded areas, but will preserve and incorporate such features into the development's site design.

Comments: *The proposed planned unit development will preserve significant areas of water, wetland, and woodlands. Areas proposed for streets and other infrastructure and for individual lots are likely to have trees removed and some grading.*

Y. Site Topography. The location of natural features and the characteristics of site topography have been considered in the designing and siting of all physical improvements.

Comments: *The design of the planned unit development and limits of individual lots appears to consider the natural features on the site.*

- Z. Current Standards. That if the site has existing improvements, all site conditions have been brought up to the current standards of this ordinance.

Comments: *There are no existing improvements on the site. This standard does not apply.*

The general review standards for special land uses are outlined in §22.04 General Review Standards for All Special Land Uses and are included below. Comments addressing these standards are included throughout this report and below.

Special land uses require an applicant to submit a statement of use, as outlined in §22.02(B)(2) Statement of Use. To the best of our knowledge, such a statement has not been provided at this time.

Comments: *The applicant should provide a statement of use, consistent with §22.02(B)(2) Statement of use.*

- A. Master Plan. The special land use will be consistent with the goals, objectives, and future land use plan described in the Township's Master Plan.

Comments: *The Future Land Use Map calls residential dwellings in this area with lots sizes ranging between half an acre and 3 acres. The Master Plan calls for cluster-style developments in these areas.*

The proposed planned unit development would preserve more natural features than a conventional development and would allow more lots within an area served by sanitary sewer.

- B. Zoning District. The special land use will be consistent with the stated intent of the zoning district.

Comments: *The proposed use planned unit development is a special land use in the Planned Commercial Industrial district.*

- C. Neighborhood Compatibility. The special land use will be designed, constructed, operated and maintained to be compatible with, and not significantly alter, the existing or intended character of the general vicinity in consideration of environmental impacts, views, aesthetics, noise, vibration, glare, air quality, drainage, traffic, property values or similar impacts.

Comments: *The proposed residential planned unit development appears to be generally consistent with the surrounding residential developments. It would have smaller setbacks for individual lots, but it would have a larger area of the site preserved in a natural state.*

- D. Environment. The special land use will not significantly impact the natural environment.

Comments: *The development of any property from a natural state to a developed state will have an impact on the natural environment. The extensive wetland areas within the open space are more likely to be protected than they would be within individual lots and are likely to provide better stormwater management.*

- E. Public Services. The special land use can be served adequately by public facilities and services such as police and fire protection, drainage structures, water and sewage facilities, refuse disposal and schools.

Comments: *It appears that the proposed planned unit development should adequately be served by public facilities and services. Additional information would be provided and reviewed as part of final site plan review.*

We defer additional comment to the applicable public facility and service agencies.

- F. Traffic. The proposed use shall be of a nature that will make vehicular and pedestrian traffic no more hazardous than is normal for the district involved, taking into consideration the following...

Comments: *The proposed planned unit development appears likely provide better vehicular circulation on the adjacent streets than a conventional plan because it would reduce the number of lots accessing Runyan Lake and increase the number of lots accessing White Lake. Additional information would be available as part of a traffic impact statement.*

The proposed planned unit development would include an extensive internal pedestrian circulation system, with more sidewalks and trailways than other residential developments in the area.

- G. Additional Development. The proposed use shall be such that the location and height of buildings or structures, and the location, nature and height of walls, fences, and landscaping will not interfere with or discourage the appropriate development and use of adjacent land and buildings or unreasonably affect their value.

Comments: *It does not appear that the proposed planned unit development would interfere with the development or use of adjacent properties. While the loss of completely natural area may affect the value of adjacent properties, it is not clear that the proposed planned unit development would unreasonably affect the value beyond a conventional development at this site.*

- H. Health, Safety and Welfare. The proposed use shall be designed, located, planned, and operated to protect the public health, safety, and welfare.

Comments: *If the Planning Commission determines that the proposed planned unit development is consistent with the standards in the Zoning Ordinance or qualifies for modifications or waivers, it should not create a negative impact on public health, safety, or welfare.*

Standards for planned unit development review are outlined in §11.08 Standards for PUD Approval and are included below. Comments addressing these standards are included throughout this report and below.

- A. Documentation is complete, unless a requirement is specifically waived by the Township Board.

Comments: *Documentation for preliminary review appears to be generally complete for preliminary review, except as otherwise noted, or may be eligible for waivers.*

B. Satisfies the standards of this article.

Comments: *The proposed planned unit development appears to generally meet the standards of the Planned Unit Development Article, except where otherwise noted, or may be eligible for waivers. The largest question is related to open space.*

C. Satisfies the standards and requirements of the Zoning Ordinance, including site plan requirements, unless specifically noted modifications have been granted.

Comments: *The proposed planned unit development appears to meet the standards of the Zoning Ordinance, if noted modifications and waivers have been granted by the Planning Commission and Township Board.*

D. Satisfies the goals and objectives of the Master Plan.

Comments: *The proposed planned unit development appears to preserve more natural features than a conventional development, provide more pedestrian circulation, and would locate more dwellings in an area served by public services (sanitary sewer).*

E. Does not adversely affect and is compatible with adjacent property areas.

Comments: *The proposed single-family dwelling use of the planned unit development appears to be consistent with the surrounding developed areas, which are primarily single-family dwellings.*

F. Does not result in a significant increase in demand for public services or facilities when compared to the development that would otherwise be permitted in that district, unless the proposal contains an acceptable plan for providing necessary services.

Comments: *The proposed planned unit development would result in 11 more lots that appear likely reasonable as part of an otherwise permitted development. It does not appear likely that the additional 11 single-family houses would result in a significant increase in demand for public services or facilities.*

G. Protects the natural environment as well or better than conventional development could have at the same location.

Comments: *It appears that the proposed planned unit development is more likely to protect and preserve natural features on the site than a conventional development. A significant portion of the wetlands will be located within common open space instead of within individual lots.*

H. Establishes a safe and efficient circulation system that is integrated into the existing and potential future road network, provides for the pedestrian, and minimizes impacts of parking, loading, and access areas.

Comments: *The proposed circulation system reduces the number of access points, and the planned unit development would allow for fewer lots accessing Runyan Lake Road than a conventional development. Ideally, the road system would have a connection between the 2 phases and to adjacent developments,*

but a connection would require extensive improvements within wetland areas and the adjacent properties do not provide ready access.

- I. Creates coordinated, visually appealing development by emphasizing the relationship between building form, signage, landscaping, and the overall theme of the development.

Comments: *It is difficult to provide guidance on this review standard. The applicant has provided renderings for proposed architecture and general landscaping information, but no information is provided about signage or "overall theme."*

SUMMARY & COMMENTS

The applicant is requesting preliminary approval at this time. The purpose of preliminary approval is to determine if the project is generally consistent with the Zoning Ordinance. Preliminary approval grants the applicant the ability to submit an application for final site plan approval; it does not create any vested rights in final approval.

The application is generally complete, but there is some information that has not been fully provided at this time. If the Planning Commission determines any missing information is not eligible for waivers or is necessary for its preliminary review, it should postpone action and direct the applicant to provide the information. Missing information that the Planning Commission does not determine is necessary for its preliminary review could be added to plans submitted for final approval.

The Planning Commission could make a favorable recommendation to the Township Board, with or without conditions, if it determines decision criteria and developmental standards are met or would be met with conditions.

The Planning Commission could postpone action if it determines there are significant or too many changes or conditions that would be necessary to receive a favorable recommendation. If this is the case, it should direct the applicant to prepare revisions based on its review and provide guidance as to what information or standards it would be comfortable with waiving.

The Planning Commission could make an unfavorable recommendation to the Township Board if it determines decision criteria and developmental standards are not met or could not easily be met with changes or conditions. The application would still be forwarded to the Township Board.


The list below includes items that require Planning Commission determinations. *(Although the Planning Commission has discussed some of these determinations previously, it is best practice to confirm them at time of review.)*

1. The Planning Commission should determine if the 1" = 150' scale is adequate for substantial review of the preliminary plan.
2. The Planning Commission should determine whether or not to waive all or a part the requirement to show the location of existing structures within 500 feet of the lot as part preliminary review.

3. The Planning Commission should determine if it will require a traffic impact statement, as outlined in Table 23.1 Requirements for Various Types of Traffic Impact Studies, as part of preliminary review.
 4. The Planning Commission should determine if a statement of use is necessary for preliminary review.
 5. The Planning Commission should determine if the parallel plan is reasonably feasible.
 6. The Planning Commission should determine if the proposed developmental standard modifications are consistent with sound planning and design, are necessary for the preservation of significant features or open space on the site or are otherwise necessary to result in a higher-quality design.
 7. The Planning Commission should determine if the criteria for additional residential lots are satisfied and, if so, what incremental bonus from 0% to 5% the planned unit development qualifies for.
 8. The Planning Commission should determine if the site characteristics, surrounding natural features, and proposed design features lend themselves to a reduced open space requirement.
 9. The Planning Commission should consider whether or not it would recommend using non-contiguous property to satisfy open space area if a waiver is not granted from the 30% minimum.
 10. The Planning Commission should determine if alternative screening would be warranted.
 11. The Planning Commission should determine if the criteria for preliminary site plan, special land use, and planned unit developments are satisfied.
-

The list below includes potential conditions of approval for the Planning Commission to consider. Additional potential conditions could also be identified at the Planning Commission meeting. Conditions associated with final review/approval have not been included below but are identified throughout this report.

1. *The applicant should provide a statement of use, consistent with §22.02(B)(2) Statement of use.*
2. *Special land use approval should only be effective upon approval of the final planned unit development and final site plan.*
3. *A table should be added to the preliminary plan listing the proposed developmental modifications requested as part of the planned unit development, the specific section of the Zoning Ordinance, and the reasons and mechanisms used to protect the public health, safety, and welfare in place of the original standards.*
4. *The cul-de-sacs should be reconfigured so the center is landscaped.*
5. *The eastern end of Valencia should be reconfigured to provide a large-vehicle turnaround.*
6. *Approval of access and circulation by the Township Engineer and Fire Inspector.*
7. *Changes or additions should be made to proposed tree species.*
8. *The site plan should include a description of the criteria proposed for residential density bonus.*
9. *Open space calculations on Sheet P-5 should be corrected. (There is no maximum contribution of upland area and additional details about stormwater basins.)*
10. *The applicant shall conduct a preapplication meeting with the Township before submitting an application for final approvals.*



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TRAFFIC IMPACT STUDY
FOR
LAKE URBAN CROSSING PUD
TYRONE TOWNSHIP, MICHIGAN

November 2021



Prepared for
Lake Urban Dev, LLC

Prepared by:



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TECHNICAL APPENDIX

Appendix A - Traffic Data

Appendix B - Crash Data

Appendix C - Existing Condition LOS Computations (Synchro Printouts)

Appendix D - Background Condition LOS Computations (Synchro Printouts)

Appendix E - Build-Out Condition LOS Computations (Synchro Printouts)

1. INTRODUCTION

1.1. PURPOSE

C&A Engineers, LLC (C&AE) conducted a traffic impact study (TIS) for the proposed Lake Urban Crossing PUD located in the NE quadrant of the White Lake Road and Runyan Lake Road Intersection, in Tyrone Township Michigan. The purpose of this study is to evaluate the impact on the existing road system from the additional vehicular traffic generated by the proposed PUD. The TIS has been prepared in accordance Tyrone Township and the Livingston County Road Commission (LCRC) guidelines.

The assessment documented in this traffic impact analysis is based on a review of existing traffic volumes, recent crash data, and the anticipated traffic generating characteristics of the proposed project. The study examines existing and projected traffic operations (both with and without the proposed PUD) at key intersections in the vicinity of the project site. The study area was selected based on a review of the surrounding roadway network and expected trip generating characteristics of the proposed project. This study provides a detailed analysis of traffic operations during the weekday morning and weekday afternoon peak hours, when the adjacent roadway volumes are greatest.

1.2. PROJECT DESCRIPTION

The site (**Figure 1**) is located in the NE quadrant of the NE quadrant of the White Lake Road and Runyan Lake Road Intersection, in Tyrone Township. The proposed PUD will be developed in two phases, Phase I (West Side) will comprise of 46 Units, constructed between the Spring of 2022 through the Spring of 2024. Phase II (East Side) will comprise of 42 Units, constructed between the Spring of 2025 through the Spring of 2027. Access to the Phase I of the PUD will be provided off of Runyan Lake Road north of the White Lake Road intersection. Access to Phase II, will be provided off of White Lake Road just east of Carmer Road. **Figure 2** illustrates the proposed site plan.

1.3. STUDY AREA

The study area for this project includes key intersections and adjacent roadways that maybe affected by this project. The specific study area includes the intersection and roadway segments listed below.

Intersections

- White Lake Road at Runyan Lake Road
- White Lake Road at Carmer Road

Road Segments

- White Lake Road
- Carmer Road
- Runyan Lake Road

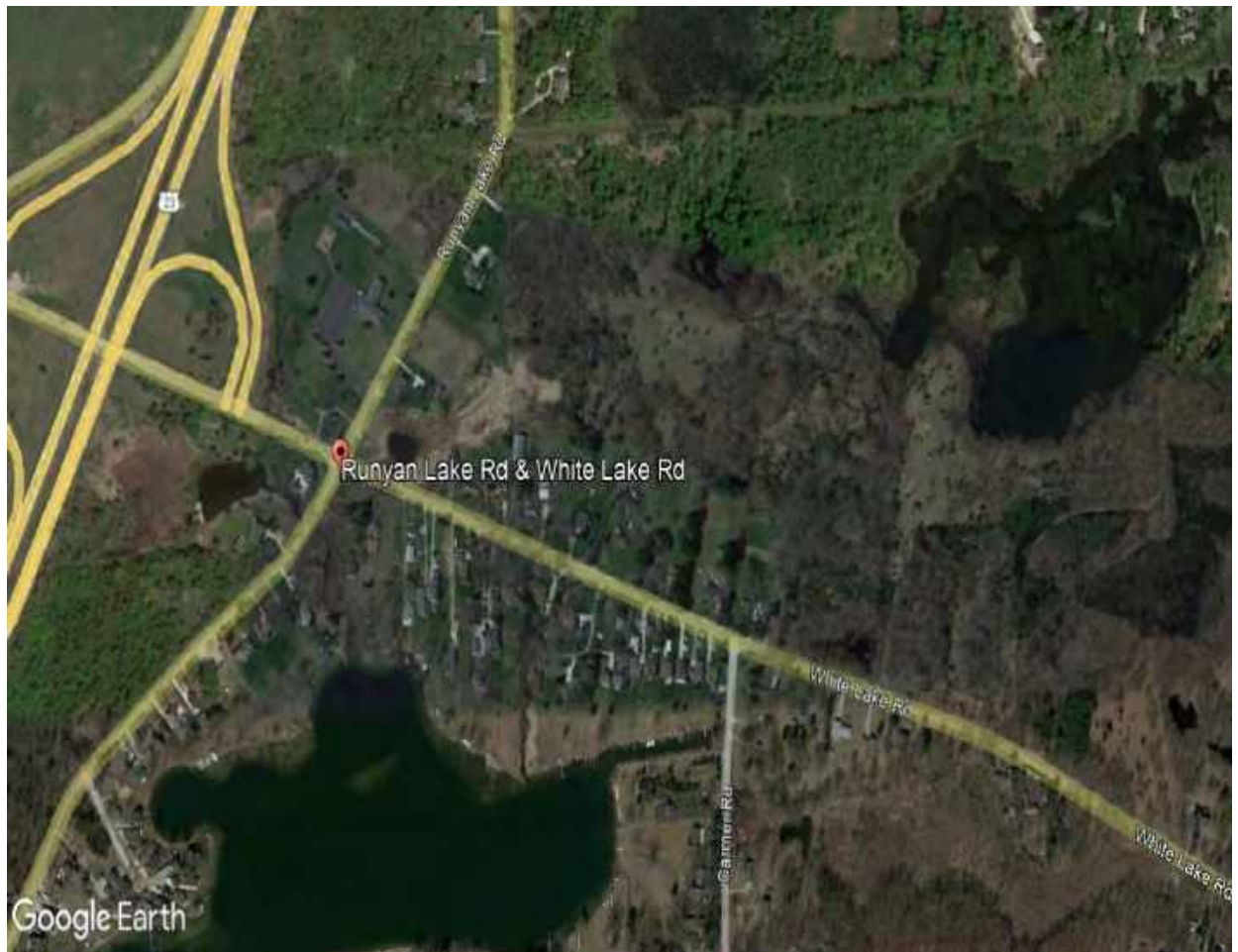


Figure 1 Project Site

1.4. STUDY ANALYSIS METHODOLOGY

This section documents the methodologies and assumptions used to conduct the traffic impact study for the PUD. This section includes the analysis condition, analysis time periods and level of service analysis methodologies and steps. **Table 1** presents a summary of the analysis condition.

TABLE 1: ANALYSIS CONDITIONS

Conditions	DESCRIPTION
Existing Conditions	The analysis of Existing Condition was based on existing traffic data at the key intersections as well as count data collected.
Background Conditions	Future traffic forecasts without the proposed development were projected for the 2024 & 2027 Background Conditions by forecasting future traffic by applying a three percent annual growth to the existing count data collected.
Build Conditions	This traffic scenario provides an assessment of operating conditions under 2024 & 2027 Build Condition with the addition of Project-generated traffic and transportation network infrastructure proposed by the Project.

1.5. LEVEL OF SERVICE ANALYSIS METHODOLOGY

The intersections and roadway segments in the study area were analyzed using procedures consistent with the Highway Capacity Manual. At intersections, the Level of Service (LOS) is based on the average delay experienced by motorists traveling through the intersection. **Table 2** and **Table 3** displays the average delay range for each LOS category associated with signalized and unsignalized intersections.

Signalized intersection operations are evaluated based on the appropriate jurisdiction's LOS standards (i.e., minimum threshold for acceptable operations). An acceptable LOS for signalized intersections is defined as LOS D or better during a peak period. The HCM 2010 method evaluates signalized intersection operations based on average control delay for all vehicles at the intersection, which can be correlated to a LOS **Table 2**.

TABLE 2: SIGNALIZED INTERSECTION LEVEL OF SERVICE

Level of Service	Description (for signalized intersections)	Avg Delay ¹ (Seconds)
A	Operations with low delay occurring with favorable traffic signal progression and/or short cycle lengths.	< 10
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10 to 20
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	>20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop, and individual cycle failures are noticeable.	> 35 to 55
E	Operations with high delay values indicating poor progression, and long cycle lengths. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	> 55 to 80
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or exceptionally long cycle lengths.	> 80

Note: 1. Average delay expressed in seconds per vehicle.

Source: Highway Capacity Manual (Transportation Research Board, 2010)

The operations of the unsignalized intersections were evaluated using HCM 2010. LOS ratings for stop-sign controlled intersections are based on the average control delay expressed in seconds per vehicle. At twoway or side-street-controlled intersections, the average control delay is calculated for each stopped movement, not for the intersection as a whole. For approaches composed of a single lane, the control delay is computed as the average of all movements in that lane. **Table 3** summarizes the relationship between delay and LOS for unsignalized intersections.

TABLE 3: UN-SIGNALIZED INTERSECTION LEVEL OF SERVICE

Level of Service	Description (for unsignalized intersection)	Average Delay ¹ (Seconds)
A	Little or no delay.	≤ 10.0
B	Short traffic delays.	10.1 to 15.0
C	Average traffic delays.	15.1 to 25.0
D	Long traffic delays.	25.1 to 35.0
E	Exceptionally long traffic delays.	35.1 to 50.0
F	Extreme traffic delays with intersection capacity exceeded.	> 50.0

Note: 1. Average delay expressed in seconds per vehicle.

Source: Highway Capacity Manual (Transportation Research Board, 2010)

The study intersections were analyzed using Synchro/SimTraffic analysis software. This software program analyzes the interaction of vehicles, pedestrians, traffic signals, and the roadway configuration. By modeling individual vehicles, the analysis can account for the effect of queue spillbacks on upstream lanes and intersections, delay to unbalanced lane utilization, and interaction between intersections due to signal coordination.

1.6. ANALYSIS STEPS

The study was conducted in three steps. The first step consisted of an inventory of existing traffic conditions within the project study area. As part of this inventory, manual turning movement counts were collected at key intersections during the weekday morning and weekday afternoon peak hours. A field visit was also completed to document intersection and roadway geometries and available sight distances at the project site driveway. Crash data for the study area intersections was obtained from the SEMCOG and used to determine if the study area has any existing traffic safety deficiencies.

The second step of the study builds upon the data collected in the first step to establish the basis for evaluating potential transportation impacts associated with the projected future conditions. During this second step, the projected traffic demands associated with any planned future developments that could influence traffic volumes at the study area intersections were assessed. Consistent with the Township and LCRC traffic impact study guidelines, the 2021 Existing traffic volumes were forecasted to the future years of 2024 and 2027 to determine Background (without project) conditions and Buildout (with project) conditions.

The third step of this study determined if measures were necessary to improve existing or future traffic operations and safety, minimize potential traffic impacts, and provide safe and efficient access to the proposed project site.

1.7. SIGNIFICANCE CRITERIA

The following thresholds of significance have been used to determine whether implementing the proposed PUD would result in a adverse transportation impact. The PUD would have a adverse impact if one of the following conditions were to occur.

1. Causes the intersection to reduce by two or more LOS categories during the AM/PM peak hours.
2. Worsen an unacceptable roadway operations to a significant degree during the weekday AM/PM peak hours.

2. EXISTING CONDITIONS

C&A Engineers on November 10, 2021, conducted peak-hour vehicular turning movement count (TMC) survey, (Appendix A) at the key intersection identified above in the Study Area section of the report, from 7:00AM to 9:00AM, and 3:00PM to 7:00PM, which are the confirmed peak AM, Noon and PM period identifies by from historical traffic data for the key intersections.

2.1. ROADWAY SEGMENTS

The principal roadways in the PUD study area are described briefly below. The description includes the physical characteristics, adjacent land uses, and traffic control devices along these roadways.

✚ White Lake Road is a northwest-southeast, 2-lane roadway, which intersects with both Runyan Lake Road and Carmer Road. The White Lake Road and Runyan Lake Road intersection has four approaches and is un-signalized, with stop control on the Runyan Lake Road approaches. The White Lake Road and Carmer Road intersection is un-signalized T-intersection, with stop control on the Carmer Road approach. The posted speed limit is 35 MPH near Runyan Lake Road and 45 MPH near Carmer Road.

✚ Runyan Lake Road is a northeast-southwest, 2-lane roadway, which intersect with White Lake Road. The posted speed limit is 40 MPH in the vicinity of the PUD.

✚ Carmer Road is a north-south, two-lane roadway, which terminates at White Lake Road. The posted speed limit is 40 MPH.

2.2. CRASH ANALYSIS

Below is summary of the crashes data obtained from SEMCOG (**Appendix B**) for the last five-years (January 1, 2016 – December 31, 2020), at each of the key intersection. **Tables 4, 5, 6 and 7**, illustrate crashes based on type, severity, road condition, weather, and year.

✚ White Lake Road at Runyan Lake Road: There were ten (10) crashes reported at the intersection during the study period, with a breakdown of five (5) angle type crashes, two (2) single-vehicle type crashes, and one (1) head-on left crash and one (1) other type crash. One (1) fatal crash occurred at the intersection.

✚ White Lake Road at Carmer Road: There was only one (1) single vehicle type crash reported at the intersection, resulting in property damage.

The majority of the angle type crashes were the result failure to stop. The following countermeasures may reduce these types of crashes.

- Overlay existing pavement
- Install intersection ahead signs
- Install street lighting

TABLE 4, CRASHES BY TYPE

Location	Crashes By Type											Total
	Single Veh	Head-On	Head-Left	Angle	Rear-End	Rear-Left	Rear-Right	Swipe-Same	Swipe Opp	Backing	Other	
White Lake Rd at Runyan Lake Rd	2	0	1	5	1	0	0	0	0	0	1	10
White Lake Rd at Carmer Rd	1	0	0	0	0	0	0	0	0	0	0	1

TABLE 5, CRASHES BY SEVERITY

Location	Severity					Total
	Fatal	A-Level	B-Level	C-Level	PDO	
White Lake Rd at Runyan Lake Rd	1	0	2	1	6	10
White Lake Rd at Carmer Rd	0	0	0	0	1	1

TABLE 6, CONDITION

Location	Road Condition						Weather Condition						Total
	Dry	Ice	Wet	Snow	Other	Total	Clear	Cloudy	Snowing	Rain	Unknown	Uncoded / Error	
White Lake Rd at Runyan Lake Rd	8	2	0	0	0	10	7	2	1	0	0	0	10
White Lake Rd at Carmer Rd	1	0	0	0	0	1	1	0	0	0	0	0	1

TABLE 7, CRASHES BY YEAR

Location	Year					Total
	2016	2017	2018	2019	2021	
White Lake Rd at Runyan Lake Rd	1	5	2	2	0	10
White Lake Rd at Carmer Rd	0	1	0	0	0	1

2.3. EXISTING INTERSECTION VOLUMES & LANE CONFIGURATIONS

The operation of the study intersection was evaluated for the highest one-hour volume during the weekday AM/PM peak hour periods. Existing TMC were collected on November 10, 2021. A summary of count data, and intersection TMC conducted for this study can be found in **Appendix A**.

2.4. INTERSECTIONS LEVEL OF SERVICE ANALYSIS

The results of the LOS analysis for study intersections under Existing Conditions are presented in **Table 8**, the corresponding LOS calculation sheets are included in **Appendix C**. The LOS analysis indicates that all of the key intersections currently operate at an acceptable LOS A during the both the AM and PM peak hours.

TABLE 8: EXISTING CONDITIONS INTERSECTION LEVEL OF SERVICE

ID	Intersection	Traffic Control Method	Movement	AM Peak Period			PM Peak Period		
				Approach Delay	Approach LOS	Intersection LOS	Approach Delay	Approach LOS	Intersection LOS
1	White Lk Rd at Runyan Lk Rd	Un-Signalized	EB	1.1	A	A (3.3)	1.1	A	A (3.1)
			WB	1.6	A		1.0	A	
			SB	10.2	B		13.0	B	
			NB	12.8	B		14.7	B	
2	White Lk Rd at Carmer Rd	Un-Signalized	EB	0.0	A	A (1.7)	0.0	A	A (1.6)
			WB	1.0	A		0.5	A	
			NB	10.7	B		12.6	B	

Notes: For unsignalized intersections, the delay values are for the critical minor approach. For signals, the delay values are the overall delay. Delay is expressed in seconds per vehicle. LOS = Level of the delay values are the overall delay.

3. BACKGROUND CONDITIONS

The Background scenarios represents conditions prior to the completion of the PUD. To evaluate the potential impact of traffic generated by the proposed PUD on the surrounding roadway system, it is necessary to first develop estimates of the traffic condition in the area without the PUD. Traffic conditions without the PUD under this scenario reflect existing traffic counts with the addition with the addition of future growth in the buildout year. The existing roadway system and intersection geometries was used for the Background analysis.

3.1. BACKGROUND TRAFFIC VOLUMES

Traffic volumes for years 2024 and 2027 Background Conditions comprise of existing volumes forecasted to projected build-out years of 2024 and 2027 utilizing an applicable growth rate. In order to determine the applicable growth rate for the existing traffic volumes to projected build-out year, historical traffic count data and population forecasts publish by SEMCOG were used to estimate future growth for the study area. Based on this data a 3% annual growth was determined, thus a 1.09 and 1.19 growth factors were used for years 2024 and 2027 respectively in the Synchro models.

3.2. BACKGROUND INTERSECTIONS LEVEL OF SERVICE ANALYSIS

The results of the LOS analysis for year 2024 and 2027 Background Conditions are summarized in **Tables 9** and **10** and detailed calculations are provided in Appendix D. The LOS analysis indicates that all of the key intersections in 2024 will operate at an acceptable LOS A during both the AM and PM peak hours. It should also be noted, that all the approaches operate at an acceptable LOS B or better.

In 2027 the key intersections will operate at an acceptable LOS A during both the AM and PM peak hours. It should also be noted, that all the approaches operate at an acceptable LOS B or better.

TABLE 9: 2024 BACKGROUND CONDITION INTERSECTION LEVEL OF SERVICE

ID	Intersection	Traffic Control Method	Movement	AM Peak Period			PM Peak Period		
				Approach Delay	Approach LOS	Intersection LOS	Approach Delay	Approach LOS	Intersection LOS
1	White Lk Rd at Runyan Lk Rd	Un-Signalized	EB	1.1	A	A (3.5)	1.1	A	A (3.3)
			WB	1.6	A		1.0	A	
			SB	10.5	B		14.0	B	
			NB	13.6	B		15.9	C	
2	White Lk Rd at Carmer Rd	Un-Signalized	EB	0.0	A	A (1.8)	0.0	A	A (1.7)
			WB	1.0	A		0.5	A	
			NB	11.0	B		13.3	B	

Notes: For unsignalized intersections, the delay values are for the critical minor approach. For signals, the delay values are the overall delay. Delay is expressed in seconds per vehicle. LOS = Level of the delay values are the overall delay.

TABLE 10: 2027 BACKGROUND CONDITION INTERSECTION LEVEL OF SERVICE

ID	Intersection	Traffic Control Method	Movement	AM Peak Period			PM Peak Period		
				Approach Delay	Approach LOS	Intersection LOS	Approach Delay	Approach LOS	Intersection LOS
1	White Lk Rd at Runyan Lk Rd	Un-Signalized	EB	0.0	A	A (3.6)	1.2	A	A (3.5)
			WB	1.6	A		1.0	A	
			SB	11.0	B		15.3	C	
			NB	14.5	B		17.3	C	
2	White Lk Rd at Carmer Rd	Un-Signalized	EB	0.0	A	A (1.8)	0.0	A	A (1.8)
			WB	1.0	A		0.5	A	
			NB	11.3	B		14.2	B	

Notes: For unsignalized intersections, the delay values are for the critical minor approach. For signals, the delay values are the overall delay. Delay is expressed in seconds per vehicle. LOS = Level of the delay values are the overall delay.

4. BUILD CONDITIONS

4.1. TRIP GENERATION

Trip generation is a measure or forecast of the number of trips that begin or end at the project site. The traffic generated is a function of the extent and type of development proposed for the site. These trips will result in some traffic increases on the streets where they occur. Vehicular traffic generation characteristics for developments are estimated based on established rates. These rates identify the probable traffic generation of various land uses-based studies of developments in comparable settings. The rates used in this analysis were determined based on rates contained in the *Trip Generation, 9th Edition, published by the Institute of Transportation Engineers (ITE) for ITE Code for Residential PUD 270*. As shown in **Table 11**, the Phase I of the PUD is expected to generate at the Runyan Lake Road access drive 5 IN / 18 OUT trips, during the AM Peak and 19 IN / 10 OUT trips during the PM Peak. As shown in **Table 12**, Phase II of the PUD is expected to generate at White Lake Road access drive 5 IN / 17 OUT trips during the AM Peak and 17 IN / 9 OUT trips during the PM Peak.

TABLE 11: PHASE I PROJECT TRIP GENERATION

Description/ITE Code	Units	ITE Vehicle Trip Generation Rates (Adjacent street traffic unless highlighted)								Units	Expected	Total Generated Trips			Total Distribution of Generated Trips					
		Weekday	AM	PM	Pass-By	AM In	AM Out	PM In	PM Out			Daily	AM Hour	PM Hour	AM In	AM Out	Pass-By	PM In	PM Out	Pass-By
Residential PUD 270	DU	7.50	0.51	0.62		22%	78%	65%	35%	DU	46.0	345	23	29	5	18	0	19	10	0

TABLE 12: PHASE II PROJECT TRIP GENERATION

Description/ITE Code	Units	ITE Vehicle Trip Generation Rates (peak hours are for peak hour of adjacent street traffic unless highlighted)								Units	Expected	Total Generated Trips			Total Distribution of Generated Trips					
		Weekday	AM	PM	Pass-By	AM In	AM Out	PM In	PM Out			Daily	AM Hour	PM Hour	AM In	AM Out	Pass-By	PM In	PM Out	Pass-By
Residential PUD 270	DU	7.50	0.51	0.62		22%	78%	65%	35%	DU	42.0	315	21	26	5	17	0	17	9	0

4.2. BUILD-OUT CONDITIONS TRIP DISTRIBUTION AND ASSIGNMENT

Trip distribution and assignment is the process of identifying the probable destinations, directions, and traffic routes that project related traffic will likely affect. The distribution of the projected trips due to the PUD was based on existing traffic patterns in the study area. The AM/PM peak hour traffic directionality in the study area varied and was applied to the trip distribution percentages using the site access points. The trips distribution reports can be found in **Appendix F**.

4.3. BUILD-OUT CONDITIONS INTERSECTION LEVEL OF SERVICE ANALYSIS

The results of the LOS analysis for year 2024 and 2027 Build-out Conditions are summarized in **Table 13** and **Table 14** and detailed calculations are provided in **Appendix E**. In years 2024 and 2027 with the addition of project trips, the key intersections are expected to operate similar to the 2024 and 2027 Background Conditions during the both the AM and PM peak hours periods.

TABLE 13: 2022 BUILD-OUT CONDITION INTERSECTION LEVEL OF SERVICE

ID	Intersection	Traffic Control Method	Movement	AM Peak Period			PM Peak Period		
				Approach Delay	Approach LOS	Intersection LOS	Approach Delay	Approach LOS	Intersection LOS
1	White Lk Rd at Runyan Lk Rd	Un-Signalized	EB	1.1	A	A (3.9)	1.3	A	A (3.5)
			WB	1.5	A		0.9	A	
			SB	12.7	B		14.6	B	
			NB	13.6	B		16.1	C	
2	White Lk Rd at Carmer Rd	Un-Signalized	EB	0.0	A	A (1.7)	0.0	A	A (1.8)
			WB	1.0	A		0.5	A	
			NB	11.1	B		13.6	B	
4	Runyan Lk Rd at Phase 1 Dr	Un-Signalized	WB	9.6	A	A (1.0)	9.4	A	A (0.5)
			NB	0.0	A		0.0	A	
			SB	0.1	A		0.2	A	

Notes: For unsignalized intersections, the delay values are for the critical minor approach. For signals, the delay values are the overall delay. Delay is expressed in seconds per vehicle. LOS = Level of the delay values are the overall delay.

TABLE 14: 2026 BUILD-OUT CONDITION INTERSECTION LEVEL OF SERVICE

ID	Intersection	Traffic Control Method	Movement	AM Peak Period			PM Peak Period		
				15.1	Approach LOS	Intersection LOS	Approach Delay	Approach LOS	Intersection LOS
1	White Lk Rd at Runyan Lk Rd	Un-Signalized	EB	1.1	A	A (4.1)	1.3	A	A (3.9)
			WB	1.5	A		1.0	A	
			SB	14.2	B		17.1	C	
			NB	14.7	B		17.8	C	
2	White Lk Rd at Carmer Rd	Un-Signalized	EB	0.0	A	A (1.8)	0.0	A	A (1.9)
			WB	1.0	A		0.5	A	
			NB	11.7	B		14.8	B	
3	Runyan Lk Rd at Phase 1 Dr	Un-Signalized	WB	9.8	A	A (1.0)	9.6	A	A (0.5)
			NB	0.0	A		0.0	A	
			SB	0.1	A		0.2	A	
4	White Lk Rd at Phase 2 Dr	Un-Signalized	EB	0.1	A	A (0.5)	0.3	A	A (0.3)
			WB	0.0	A		0.0	A	
			SB	10.2	B		12.5	B	

Notes: For unsignalized intersections, the delay values are for the critical minor approach. For signals, the delay values are the overall delay. Delay is expressed in seconds per vehicle. LOS = Level of the delay values are the overall delay.

5. CONCLUSIONS

C&A Engineers has reached the following conclusions regarding the proposed Lake Urban Crossing PUD located in the NE quadrant of the White Lake Road and Runyan Lake Road intersection, in Tyrone Township. The proposed PUD will be developed in two phases, Phase I (West Side) will comprise of 46 Units, constructed between the Spring of 2022 through the Spring of 2024. Phase II (East Side) will comprise of 42 Units, constructed between the Spring of 2025 through the Spring of 2027. Access to the Phase I of the PUD will be provided off of Runyan Lake Road north of the White Lake Road intersection. Access to Phase II will be provided off of White Lake Road just east of Carmer Road.

Based on the analysis presented in this assessment, the Phase I of the PUD is expected to generate at the Runyan Lake Road access drive 5 IN / 18 OUT trips, during the AM Peak and 19 IN / 10 OUT trips during the PM Peak. Phase II of the PUD is expected to generate at White Lake Road access drive 5 IN / 17 OUT trips during the AM Peak and 17 IN / 9 OUT trips during the PM Peak.

The capacity analysis indicates that Phase I and Phase II of the proposed PUD would have a negligible impact on the operations of the study area intersections and adjacent roadway segments. In year 2024 with the addition of traffic generated by the PUD, the key intersections analyzed are expected to continue to operate at similar LOS ratings as the 2021 Existing and 2024 Background conditions. In year 2027 with the addition of traffic generated by the project, the key intersections analyzed are expected to continue to operate at similar LOS ratings as the 2021 Existing and 2027 Background conditions.

Based on a review of the conservative analysis contained within this traffic impact study, the proposed PUD is not expected to have a noticeable impact on the traffic operations of the study area roadways and intersections. Based on these findings, and the recommendations listed below, it is concluded that the site is particularly well suited for proposed PUD.

Technical Appendix

Appendix - A

TRAFFIC DATA



Date: 10-Nov-21
 Location: White Lk Rd at Runyan Lk Rd
 Time Interval: 7AM-9AM; 11AM-1PM

Time	Runyan Lk Rd			White Lk Rd			Runyan Lk Rd			White Lk Rd		
	SB Right	SB Thru	SB Left	WB Right	WB Thru	WB Left	NB Right	NB Thru	NB Left	EB Right	EB Thru	EB Left
6:45 - 7:00	7	4	1	3	9	3	6	3	3	5	39	8
7:00 - 7:15	7	4	1	3	11	3	6	3	3	10	72	14
7:15 - 7:30	5	4	1	4	12	4	7	3	4	11	85	16
7:30 - 7:45	8	5	2	3	13	4	8	4	3	12	92	18
7:45 - 8:00	10	6	2	5	11	3	12	6	3	12	91	18
8:00 - 8:15	14	7	2	4	19	6	15	6	2	8	66	13
8:15 - 8:30	9	6	2	4	24	7	10	2	2	8	58	11
8:30 - 8:45	16	2	2	5	26	7	10	4	2	6	48	9
8:45 - 9:00	14	8	2	6	30	9	12	5	4	5	38	8
10:45 - 11:00	9	4	3	6	85	8	13	5	4	3	20	4
11:00 - 11:15	7	6	1	8	16	5	9	3	4	3	24	5
11:15 - 11:30	10	9	2	11	17	7	9	2	6	4	28	6
11:30 - 11:45	12	9	3	8	22	7	12	3	5	4	30	6
11:45 - 12:00	12	8	3	10	16	6	18	4	6	5	30	7
12:00 - 12:15	10	8	2	9	27	9	16	2	8	5	35	6
12:15 - 12:30	12	4	2	5	38	10	20	2	9	4	32	5
12:30 - 12:45	10	4	3	5	41	11	21	5	7	5	37	8
12:45 - 13:00	12	3	2	7	39	6	26	4	8	5	36	7
14:45 - 15:00	14	6	2	5	23	6	3	2	2	4	30	6
15:00 - 15:15	12	5	2	11	19	7	3	3	1	4	32	6
15:15 - 15:30	12	7	2	6	29	8	3	2	3	5	37	7
15:30 - 15:45	15	7	3	12	26	9	5	0	4	5	40	8
15:45 - 16:00	16	4	3	11	28	9	5	3	3	6	46	9
16:00 - 16:15	15	5	4	9	43	13	4	2	3	4	37	7
16:15 - 16:30	13	5	2	6	55	15	5	2	4	6	42	8
16:30 - 16:45	10	6	2	9	57	16	4	3	5	6	46	9
16:45 - 17:00	10	7	1	9	43	13	4	4	4	7	48	9
17:00 - 17:15	14	6	2	9	52	15	2	2	2	7	53	10
17:15 - 17:30	16	7	3	10	62	17	3	4	1	8	62	12
17:30 - 17:45	14	9	3	12	75	9	3	4	1	9	66	13
17:45 - 18:00	15	4	5	7	62	9	3	2	2	7	55	10
18:00 - 18:15	12	2	4	7	69	7	4	5	2	6	50	8
18:15 - 18:30	12	2	4	6	83	8	5	2	6	7	56	11
18:30 - 18:45	10	4	3	7	79	9	5	4	5	8	60	12
18:45 - 19:00	10	3	1	5	73	7	4	4	6	7	55	11

A.M. Peak Hour (Midnight to Noon)

Time	Runyan Lk Rd			White Lk Rd			Runyan Lk Rd			White Lk Rd		
	SB Right	SB Thru	SB Left	WB Right	WB Thru	WB Left	NB Right	NB Thru	NB Left	EB Right	EB Thru	EB Left
7:15 - 7:30	5	4	1	4	12	4	7	3	4	11	85	16
7:30 - 7:45	8	5	2	3	13	4	8	4	3	12	92	18
7:45 - 8:00	10	6	2	5	11	3	12	6	3	12	91	18
8:00 - 8:15	14	7	2	4	19	6	15	6	2	8	66	13
7:15 - 8:15	37	22	7	16	55	17	42	19	12	43	334	65

Peak Hour Factor: 0.934

P.M. Peak Hour (Noon to Midnight)

Time	Runyan Lk Rd			White Lk Rd			Runyan Lk Rd			White Lk Rd		
	SB Right	SB Thru	SB Left	WB Right	WB Thru	WB Left	NB Right	NB Thru	NB Left	EB Right	EB Thru	EB Left
17:15 - 17:30	16	7	3	10	62	17	3	4	1	8	62	12
17:30 - 17:45	14	9	3	12	75	9	3	4	1	9	66	13
17:45 - 18:00	15	4	5	7	62	9	3	2	2	7	55	10
18:00 - 18:15	12	2	4	7	69	7	4	5	2	6	50	8
17:15 - 18:15	57	22	15	36	268	42	13	15	6	30	233	43

Peak Hour Factor: 0.894



Date: 10-Nov-21
 Location: White Lk Rd at Carmer Rd
 Time Interval: 7AM-9AM; 11AM-1PM

Time	Carmer Rd			White Lk Rd			Carmer Rd			White Lk Rd		
	SB Right	SB Thru	SB Left	WB Right	WB Thru	WB Left	NB Right	NB Thru	NB Left	EB Right	EB Thru	EB Left
6:45 - 7:00	0	0	0	0	22	4	1	0	2	1	7	0
7:00 - 7:15	0	0	0	0	27	2	0	0	1	3	9	0
7:15 - 7:30	0	0	0	0	30	2	2	0	3	3	9	0
7:30 - 7:45	0	0	0	0	34	3	1	0	3	4	12	0
7:45 - 8:00	0	0	0	0	51	7	2	0	4	8	24	0
8:00 - 8:15	0	0	0	0	45	5	4	0	7	11	32	0
8:15 - 8:30	0	0	0	0	40	4	4	0	7	14	39	0
8:30 - 8:45	0	0	0	0	36	8	7	0	8	9	31	0
8:45 - 9:00	0	0	0	0	31	6	5	0	7	13	35	0
10:45 - 11:00	0	0	0	0	34	3	5	0	8	4	21	0
11:00 - 11:15	0	0	0	0	32	3	7	0	11	8	23	0
11:15 - 11:30	0	0	0	0	35	6	5	0	7	5	18	0
11:30 - 11:45	0	0	0	0	41	4	8	0	8	10	27	0
11:45 - 12:00	0	0	0	0	39	6	8	0	10	9	27	0
12:00 - 12:15	0	0	0	0	42	5	6	0	9	13	38	0
12:15 - 12:30	0	0	0	0	36	7	5	0	7	15	42	0
12:30 - 12:45	0	0	0	0	32	5	7	0	8	17	54	0
12:45 - 13:00	0	0	0	0	48	3	7	0	6	11	37	0
14:45 - 15:00	0	0	0	0	49	5	4	0	7	7	45	0
15:00 - 15:15	0	0	0	0	40	6	4	0	6	10	51	0
15:15 - 15:30	0	0	0	0	37	6	5	0	6	7	49	0
15:30 - 15:45	0	0	0	0	47	2	6	0	5	9	49	0
15:45 - 16:00	0	0	0	0	53	5	6	0	4	9	61	0
16:00 - 16:15	0	0	0	0	56	4	4	0	5	11	64	0
16:15 - 16:30	0	0	0	0	65	3	5	0	8	12	60	0
16:30 - 16:45	0	0	0	0	59	4	5	0	8	11	58	0
16:45 - 17:00	0	0	0	0	67	4	6	0	9	11	71	0
17:00 - 17:15	0	0	0	0	78	5	4	0	9	9	63	0
17:15 - 17:30	0	0	0	0	65	5	5	0	7	8	57	0
17:30 - 17:45	0	0	0	0	76	4	7	0	9	9	64	0
17:45 - 18:00	0	0	0	0	71	4	4	0	8	18	72	0
18:00 - 18:15	0	0	0	0	74	5	4	0	7	10	50	0
18:15 - 18:30	0	0	0	0	62	4	3	0	6	14	57	0
18:30 - 18:45	0	0	0	0	45	3	4	0	4	11	44	0
18:45 - 19:00	0	0	0	0	36	2	4	0	4	12	40	0

A.M. Peak Hour (Midnight to Noon)

Time	Carmer Rd			White Lk Rd			Carmer Rd			White Lk Rd		
	SB Right	SB Thru	SB Left	WB Right	WB Thru	WB Left	NB Right	NB Thru	NB Left	EB Right	EB Thru	EB Left
8:00 - 8:15	0	0	0	0	45	5	4	0	7	11	32	0
8:15 - 8:30	0	0	0	0	40	4	4	0	7	14	39	0
8:30 - 8:45	0	0	0	0	36	8	7	0	8	9	31	0
8:45 - 9:00	0	0	0	0	31	6	5	0	7	13	35	0
8:00 - 9:00	0	0	0	0	152	23	20	0	29	47	137	0

Peak Hour Factor: 0.944

P.M. Peak Hour (Noon to Midnight)

Time	Carmer Rd			White Lk Rd			Carmer Rd			White Lk Rd		
	SB Right	SB Thru	SB Left	WB Right	WB Thru	WB Left	NB Right	NB Thru	NB Left	EB Right	EB Thru	EB Left
17:00 - 17:15	0	0	0	0	78	5	4	0	9	9	63	0
17:15 - 17:30	0	0	0	0	65	5	5	0	7	8	57	0
17:30 - 17:45	0	0	0	0	76	4	7	0	9	9	64	0
17:45 - 18:00	0	0	0	0	71	4	4	0	8	18	72	0
17:00 - 18:00	0	0	0	0	290	18	20	0	33	44	256	0

Peak Hour Factor: 0.934

Appendix - B

CRASH DATA

Crash and Road Data

Intersection

Within distance from intersection: 150 feet

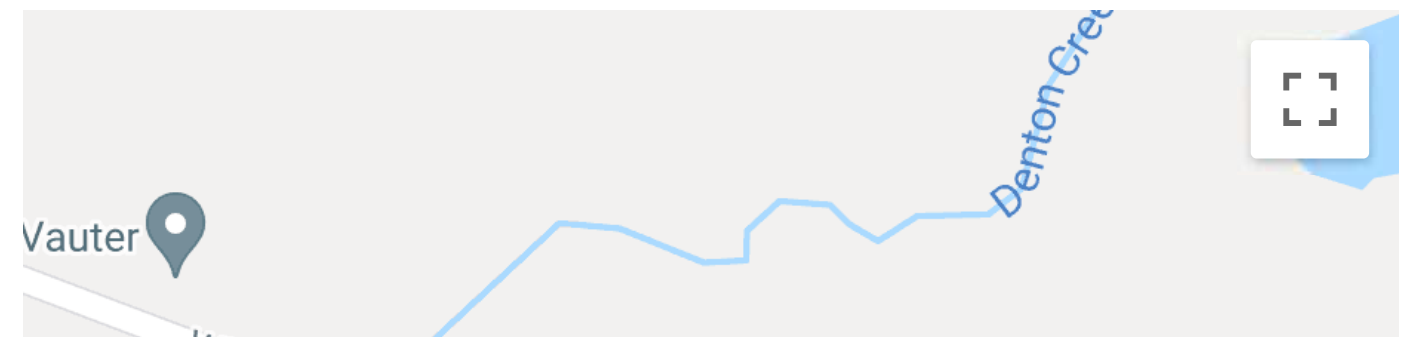
White Lake Rd - Carmer Rd
White Lake Rd - 931905 Mile 3.383

At: Carmer Rd (937206 Mile 1.014)

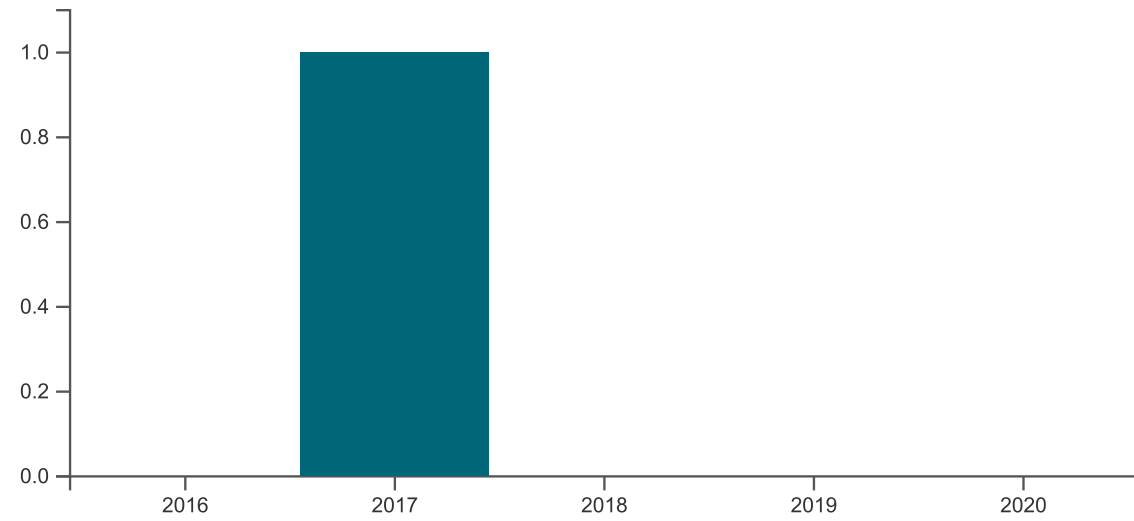
Point ID: 47000783

[VIEW DETAIL CRASH LIST](#)

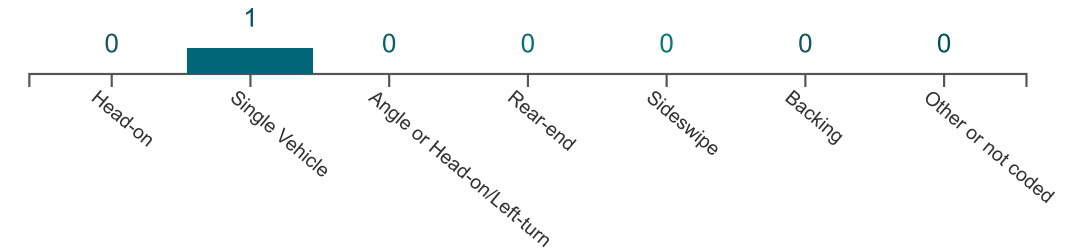
Street View



Crashes, 2016-2020



Crashes by Type, 2016-2020



Crash Type

Crash Type	2016	2017	2018	2019	2020	Percent of Crashes
Head On	0	0	0	0	0	0.0%
Single Vehicle	0	1	0	0	0	100.0%
Angle	0	0	0	0	0	0.0%
Head On/Left Turn	0	0	0	0	0	0.0%
Rear End	0	0	0	0	0	0.0%
Read End Left	0	0	0	0	0	0.0%
Rear End Right	0	0	0	0	0	0.0%
Total Crashes	0	1	0	0	0	100.0%

Crash Severity

Crash Severity	2016	2017	2018	2019	2020	Percent of Crashes
Fatal	0	0	0	0	0	0.0%
Serious Injury	0	0	0	0	0	0.0%
Other Injury	0	0	0	0	0	0.0%
Property Damage Only	0	1	0	0	0	100.0%
Total Crashes	0	1	0	0	0	100.0%

Crash Type	2016	2017	2018	2019	2020	Percent of Crashes
Sideswipe Opposite	0	0	0	0	0	0.0%
Sideswipe Same	0	0	0	0	0	0.0%
Backing	0	0	0	0	0	0.0%
Other/Unknown	0	0	0	0	0	0.0%
Total Crashes	0	1	0	0	0	100.0%

Crash by Involvement

Crash by Involvement	2016	2017	2018	2019	2020	Percent of Crashes
Red-light Running	0	0	0	0	0	0.0%
Lane Departure	0	0	0	0	0	0.0%
Alcohol	0	0	0	0	0	0.0%
Drugs	0	0	0	0	0	0.0%
Deer	0	1	0	0	0	100.0%
Train	0	0	0	0	0	0.0%
Commercial Truck/Bus	0	0	0	0	0	0.0%
School Bus	0	0	0	0	0	0.0%
Emergency Vehicle	0	0	0	0	0	0.0%
Motorcycle	0	0	0	0	0	0.0%

Crash by Involvement	2016	2017	2018	2019	2020	Percent of Crashes
Intersection	0	0	0	0	0	0.0%
Work Zone	0	0	0	0	0	0.0%
Pedestrian	0	0	0	0	0	0.0%
Bicyclist	0	0	0	0	0	0.0%
Disctracted Driver	0	0	0	0	0	0.0%
Older Driver (65 and older)	0	0	0	0	0	0.0%
Young Driver (16 to 24)	0	0	0	0	0	0.0%

Crash and Road Data

From: To:
Within distance from intersection:

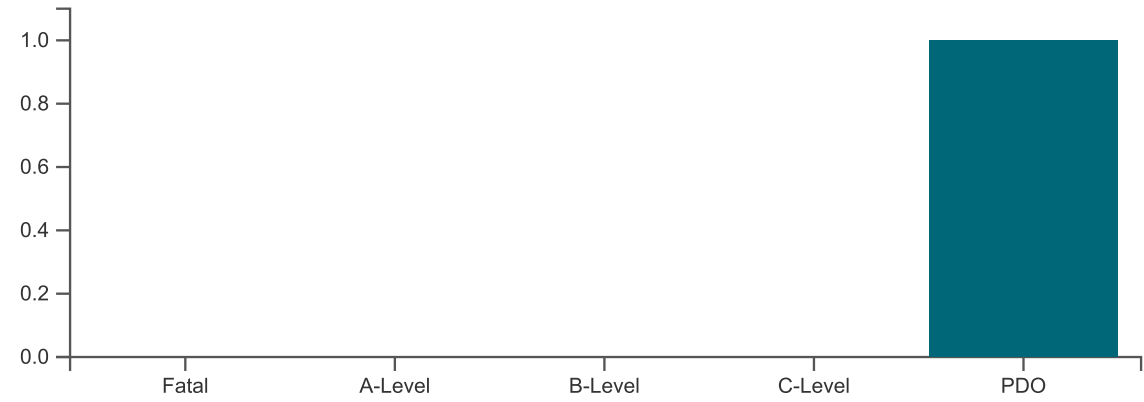
[DOWNLOAD RESULTS \(.CSV\)](#)

Total Traffic Crashes:	1
Annual Crash Average:	0
Road:	White Lake Rd 3.383
Cross Road:	Carmer Rd 1.014
Point ID:	47000783

Street View



Crashes by Severity



Crash By Severity	
Fatal	0
A-Level	0
B-Level	0
C-Level	0
Total ABC	0
PDO	1

Number Of Injuries	
Fatal	0
A-Level	0
B-Level	0
C-Level	0
Total ABC	0

Crashes By Type			
Uncoded	0	Rear-Left	0
Single Veh	1	Rear-Right	0
Head-On	0	Swipe-Same	0
Head-Left	0	Swipe-Opp	0
Angle	0	Backing	0
Rear-End	0	Other/Unknown	0

Crash Details

Search:

ID	Road Name	Mile	PR	Date	DOW	Time	Severity	Type	Weather	Lighting	Road	Off	Units	Factor
<u>1096005</u>	White Lake Rd	3.355	931905	Jul 9, 2017	Sun	6pm	PDO	Single veh.	Clear	Dark	Dry	148	1	D

Showing 1 to 1 of 1 entries

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Resources

[UD-10 Manual](#)

Definition of Terms

Severity

Fatal - a crash which resulted in at least one fatality

A-level - a crash in which the worst injury incurred was an A-level (serious) injury.

B-level - a crash in which the worst injury incurred was a B-level (minor) injury.

C-level - a crash in which the worst injury incurred was a C-level (possible) injury.

PDO - a crash which resulted in property damage only (no injuries).

Crash Type:

Uncoded - crash type was coded improperly or not coded

Single veh. - a single vehicle crash

Head-on - a head-on crash

Head-left - a head-on/left-turn crash

Angle - an angle crash

Rear-end - a rear end crash

Rear-left - a rear-end/left-turn crash

Rear-right - a rear-end/right-turn crash

Swipe-same - a sideswipe/same direction crash

Swipe-opp. - a sideswipe/opposite direction crash

Backing - a backing up crash

Other - other or unknown crash type

Factors:

A - alcohol involved in crash

B - bicycle involved in crash

L - lane departure involved in crash

M - motorcycle involved in crash

C - commercial truck involved in crash
D - deer involved in crash
E - EMS vehicle involved in crash
F - elderly driver involved in crash
G - drugs involved in crash
H - distracted driver involved in crash
I - intersection involved in crash

P - pedestrian involved in crash
R - red light running involved in crash
S - school bus involved in crash
T - train involved in crash
W - workzone involved in crash
Y - young driver involved in crash

Crash and Road Data

Intersection

Within distance from intersection: 150 feet

White Lake Rd - Runyan Lake Rd

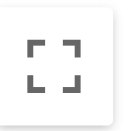
White Lake Rd - 931905 Mile 3.717

At: Runyan Lake Rd (937103 Mile 7.325)

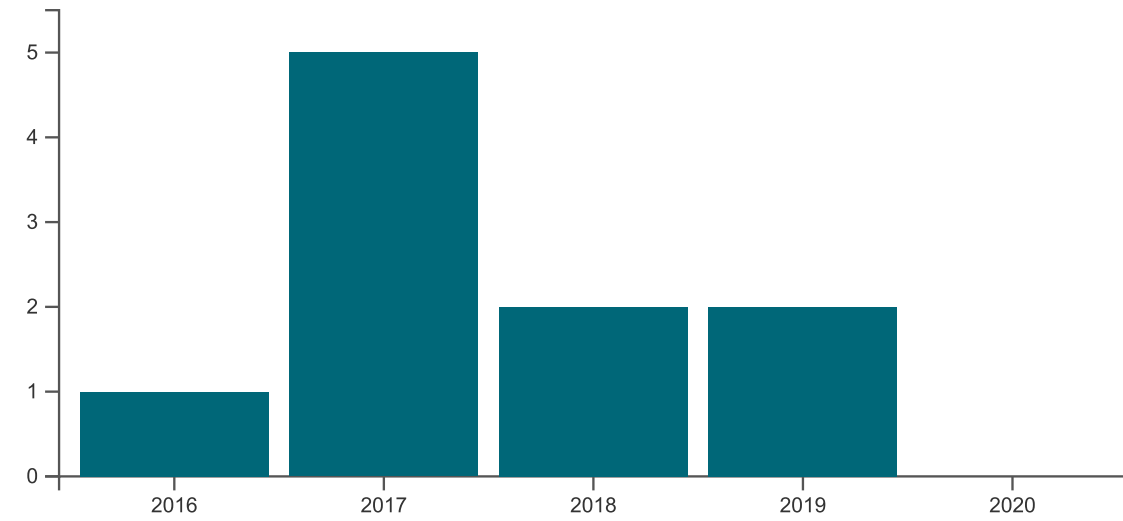
Point ID: 47000717

[VIEW DETAIL CRASH LIST](#)

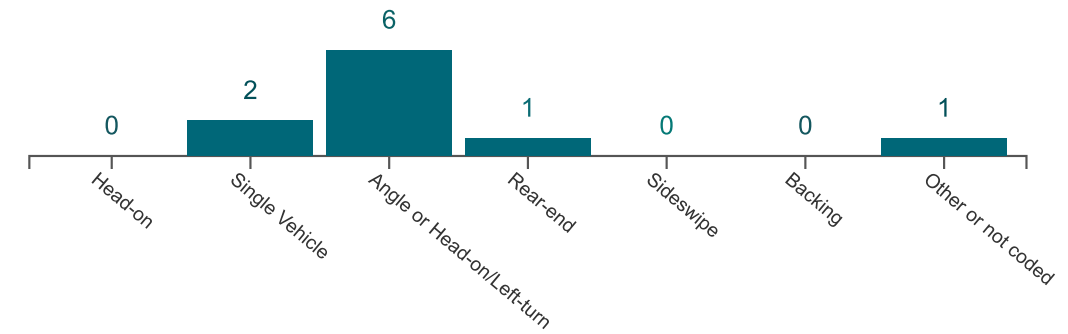
Street View



Crashes, 2016-2020



Crashes by Type, 2016-2020



Crash Type

Crash Type	2016	2017	2018	2019	2020	Percent of Crashes
Head On	0	0	0	0	0	0.0%
Single Vehicle	1	1	0	0	0	20.0%
Angle	0	3	0	2	0	50.0%
Head On/Left Turn	0	1	0	0	0	10.0%
Rear End	0	0	1	0	0	10.0%
Read End Left	0	0	0	0	0	0.0%
Rear End Right	0	0	0	0	0	0.0%
Total Crashes	1	5	2	2	0	100.0%

Crash Severity

Crash Severity	2016	2017	2018	2019	2020	Percent of Crashes
Fatal	0	0	0	1	0	10.0%
Serious Injury	0	0	0	0	0	0.0%
Other Injury	1	1	1	0	0	30.0%
Property Damage Only	0	4	1	1	0	60.0%
Total Crashes	1	5	2	2	0	100.0%

Crash Type	2016	2017	2018	2019	2020	Percent of Crashes
Sideswipe Opposite	0	0	0	0	0	0.0%
Sideswipe Same	0	0	0	0	0	0.0%
Backing	0	0	0	0	0	0.0%
Other/Unknown	0	0	1	0	0	10.0%
Total Crashes	1	5	2	2	0	100.0%

Crash by Involvement

Crash by Involvement	2016	2017	2018	2019	2020	Percent of Crashes
Red-light Running	0	0	0	0	0	0.0%
Lane Departure	1	0	0	0	0	10.0%
Alcohol	0	0	0	1	0	10.0%
Drugs	0	0	0	0	0	0.0%
Deer	0	1	0	0	0	10.0%
Train	0	0	0	0	0	0.0%
Commercial Truck/Bus	0	1	0	0	0	10.0%
School Bus	0	1	0	0	0	10.0%
Emergency Vehicle	0	0	0	0	0	0.0%
Motorcycle	0	0	0	1	0	10.0%

Crash by Involvement	2016	2017	2018	2019	2020	Percent of Crashes
Intersection	0	4	2	2	0	80.0%
Work Zone	0	0	0	0	0	0.0%
Pedestrian	0	0	0	0	0	0.0%
Bicyclist	0	0	0	0	0	0.0%
Disctracted Driver	0	0	0	1	0	10.0%
Older Driver (65 and older)	0	1	1	0	0	20.0%
Young Driver (16 to 24)	1	1	2	2	0	60.0%

Crash and Road Data

From: To:
Within distance from intersection:

[DOWNLOAD RESULTS \(.CSV\)](#)

Total Traffic Crashes: 10

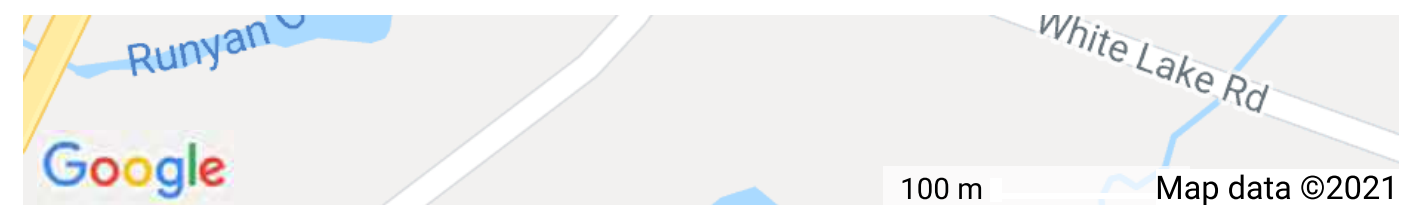
Annual Crash Average: 2

Road: White Lake Rd 3.717

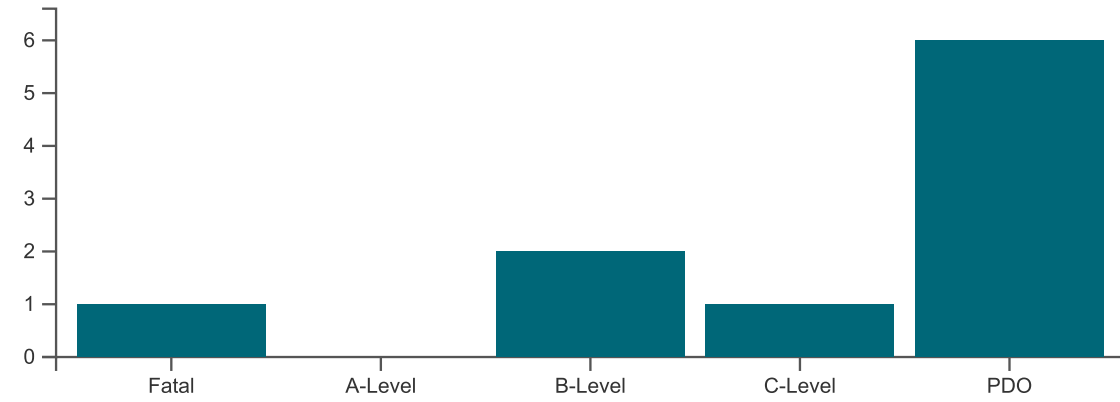
Cross Road: Runyan Lake Rd 7.325

Point ID: 47000717

Street View



Crashes by Severity



Crash By Severity

Fatal	1
A-Level	0
B-Level	2
C-Level	1
Total ABC	3
PDO	6

Number Of Injuries

Fatal	1
A-Level	0
B-Level	2
C-Level	1
Total ABC	3

Crashes By Type

Uncoded	0	Rear-Left	0
Single Veh	2	Rear-Right	0
Head-On	0	Swipe-Same	0
Head-Left	1	Swipe-Opp	0
Angle	5	Backing	0
Rear-End	1	Other/Unknown	1

Crash Details

Search:

ID	Road Name	Mile	PR	Date	DOW	Time	Severity	Type	Weather	Lighting	Road	Off	Units	Factor
1075918	White Lake Rd	3.713	931905	Jul 6, 2017	Thu	5pm	B-level	Angle	Clear	Daylight	Dry	21	2	I
1113983	White Lake Rd	3.717	931905	Aug 18, 2017	Fri	11am	PDO	Angle	Cloudy	Daylight	Dry	0	2	F I Y
1174943	White Lake Rd	3.703	931905	Oct 28, 2017	Sat	7pm	PDO	Single veh.	Clear	Dark	Dry	74	1	D
1496250	Runyan Lake Rd	7.326	937103	Oct 11, 2018	Thu	3pm	PDO	Rear-end	Cloudy	Daylight	Dry	5	2	F I Y
1560794	White Lake Rd	3.708	931905	Dec 4, 2018	Tue	3pm	B-level	Other	Clear	Daylight	Dry	48	3	I Y
1786048	White Lake Rd	3.718	931905	Aug 15, 2019	Thu	4pm	PDO	Angle	Clear	Daylight	Dry	5	2	I Y
1810341	White Lake Rd	3.717	931905	Aug 3, 2019	Sat	6pm	Fatal	Angle	Clear	Daylight	Dry	0	2	A H I M Y
9674608	Runyan Lake Rd	7.311	937103	Apr 10, 2016	Sun	11am	C-level	Single veh.	Snow	Daylight	Icy	74	1	L Y
9961197	Runyan Lake Rd	7.326	937103	Feb 14, 2017	Tue	7am	PDO	Head-left	Clear	Dawn	Dry	5	2	I
9966183	Runyan Lake Rd	7.325	937103	Mar 2, 2017	Thu	8am	PDO	Angle	Clear	Daylight	Icy	0	2	C I S

Showing 1 to 10 of 10 entries

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Resources

[UD-10 Manual](#)

Definition of Terms

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H - distracted driver involved in crash

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L - lane departure involved in crash

M - motorcycle involved in crash

P - pedestrian involved in crash

R - red light running involved in crash

S - school bus involved in crash

T - train involved in crash

W - workzone involved in crash

Y - young driver involved in crash



Appendix - C

EXISTING CONDITION

SYNCHRO RESULTS

Lake Urban Crossing
3: Runyan Lk Rd & White Lake Rd

Existing Condition
Timing Plan: AM Peak

Intersection										
Int Delay, s/veh	3.3									
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NEL	NER
Lane Configurations		↕			↕		↕		↕	
Traffic Vol, veh/h	65	334	43	17	55	16	7	22	19	42
Future Vol, veh/h	65	334	43	17	55	16	7	22	19	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-
Veh in Median Storage, #	-	0	-	-	0	-	0	-	0	-
Grade, %	-	0	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	363	47	18	60	17	8	24	21	46

Major/Minor	Major1		Major2		Minor2		Minor1			
Conflicting Flow All	77	0	0	410	0	0	667	69	666	387
Stage 1	-	-	-	-	-	-	105	-	529	-
Stage 2	-	-	-	-	-	-	562	-	137	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.22	7.12	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	6.12	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	3.318	3.518	3.318
Pot Cap-1 Maneuver	1522	-	-	1149	-	-	372	994	373	661
Stage 1	-	-	-	-	-	-	901	-	533	-
Stage 2	-	-	-	-	-	-	512	-	866	-
Platoon blocked, %		-	-		-	-				
Mov Cap-1 Maneuver	1522	-	-	1149	-	-	312	994	320	661
Mov Cap-2 Maneuver	-	-	-	-	-	-	312	-	320	-
Stage 1	-	-	-	-	-	-	846	-	500	-
Stage 2	-	-	-	-	-	-	429	-	793	-

Approach	EB		WB		SB		NE	
HCM Control Delay, s	1.1		1.6		10.2		12.8	
HCM LOS					B		B	

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	526	1522	-	-	1149	-	-	738
HCM Lane V/C Ratio	0.126	0.046	-	-	0.016	-	-	0.065
HCM Control Delay (s)	12.8	7.5	0	-	8.2	0	-	10.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0	-	-	0.2

Lake Urban Crossing
6: Carmer Rd & White Lake Rd

Existing Condition
Timing Plan: AM Peak

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	137	47	23	152	29	20
Future Vol, veh/h	137	47	23	152	29	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	51	25	165	32	22

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	200	0	390
Stage 1	-	-	-	-	175
Stage 2	-	-	-	-	215
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1372	-	614
Stage 1	-	-	-	-	855
Stage 2	-	-	-	-	821
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1372	-	602
Mov Cap-2 Maneuver	-	-	-	-	602
Stage 1	-	-	-	-	855
Stage 2	-	-	-	-	805

Approach	EB	WB	NB
HCM Control Delay, s	0	1	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	688	-	-	1372	-
HCM Lane V/C Ratio	0.077	-	-	0.018	-
HCM Control Delay (s)	10.7	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Lake Urban Crossing
3: Runyan Lk Rd & White Lake Rd

Existing Condition
Timing Plan: PM Peak

Intersection

Int Delay, s/veh 3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NEL	NER
Lane Configurations		↕			↕		↕		↕	
Traffic Vol, veh/h	43	233	30	42	268	36	15	22	15	13
Future Vol, veh/h	43	233	30	42	268	36	15	22	15	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-
Veh in Median Storage, #	-	0	-	-	0	-	0	-	0	-
Grade, %	-	0	-	-	0	-	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	262	34	47	301	40	17	25	17	15

Major/Minor	Major1	Major2	Minor2	Minor1
Conflicting Flow All	341	0	0	296
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1218	-	-	1265
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1218	-	-	1265
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	SB	NE
HCM Control Delay, s	1.1	1	13	14.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	402	1218	-	-	1265	-	-	528
HCM Lane V/C Ratio	0.078	0.04	-	-	0.037	-	-	0.153
HCM Control Delay (s)	14.7	8.1	0	-	8	0	-	13
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0.1	-	-	0.5

Lake Urban Crossing
6: Carmer Rd & White Lake Rd

Existing Condition
Timing Plan: PM Peak

Intersection						
Int Delay, s/veh	1.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	256	44	18	290	33	44
Future Vol, veh/h	256	44	18	290	33	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	278	48	20	315	36	48

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	326	0	657	302
Stage 1	-	-	-	-	302	-
Stage 2	-	-	-	-	355	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1234	-	430	738
Stage 1	-	-	-	-	750	-
Stage 2	-	-	-	-	710	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1234	-	421	738
Mov Cap-2 Maneuver	-	-	-	-	421	-
Stage 1	-	-	-	-	750	-
Stage 2	-	-	-	-	696	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	12.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	558	-	-	1234	-
HCM Lane V/C Ratio	0.15	-	-	0.016	-
HCM Control Delay (s)	12.6	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0	-



Appendix - D

BACKGROUND CONDITIONS

SYNCHRO RESULTS

Lake Urban Crossing
3: Runyan Lk Rd & White Lake Rd

2024 Background Condition
Timing Plan: AM Peak

Intersection										
Int Delay, s/veh	3.5									
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NEL	NER
Lane Configurations		↕			↕		↕		↕	
Traffic Vol, veh/h	65	334	43	17	55	16	7	22	19	42
Future Vol, veh/h	65	334	43	17	55	16	7	22	19	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-
Veh in Median Storage, #	-	0	-	-	0	-	0	-	0	-
Grade, %	-	0	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	396	51	20	65	19	8	26	23	50

Major/Minor	Major1		Major2		Minor2		Minor1			
Conflicting Flow All	84	0	0	447	0	0	727	75	726	422
Stage 1	-	-	-	-	-	-	115	-	576	-
Stage 2	-	-	-	-	-	-	612	-	150	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.22	7.12	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	6.12	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	3.318	3.518	3.318
Pot Cap-1 Maneuver	1513	-	-	1113	-	-	339	986	340	632
Stage 1	-	-	-	-	-	-	890	-	503	-
Stage 2	-	-	-	-	-	-	480	-	853	-
Platoon blocked, %		-	-		-	-				
Mov Cap-1 Maneuver	1513	-	-	1113	-	-	277	986	285	632
Mov Cap-2 Maneuver	-	-	-	-	-	-	277	-	285	-
Stage 1	-	-	-	-	-	-	829	-	469	-
Stage 2	-	-	-	-	-	-	392	-	773	-

Approach	EB		WB		SB		NE	
HCM Control Delay, s	1.1		1.6		10.5		13.6	
HCM LOS					B		B	

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	493	1513	-	-	1113	-	-	701
HCM Lane V/C Ratio	0.147	0.051	-	-	0.018	-	-	0.074
HCM Control Delay (s)	13.6	7.5	0	-	8.3	0	-	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0.2	-	-	0.1	-	-	0.2

Lake Urban Crossing
6: Carmer Rd & White Lake Rd

2024 Background Condition
Timing Plan: AM Peak

Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	137	47	23	152	29	20
Future Vol, veh/h	137	47	23	152	29	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	162	56	27	180	34	24

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	218	0	424
Stage 1	-	-	-	-	190
Stage 2	-	-	-	-	234
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1352	-	587
Stage 1	-	-	-	-	842
Stage 2	-	-	-	-	805
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1352	-	574
Mov Cap-2 Maneuver	-	-	-	-	574
Stage 1	-	-	-	-	842
Stage 2	-	-	-	-	787

Approach	EB	WB	NB
HCM Control Delay, s	0	1	11
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	662	-	-	1352	-
HCM Lane V/C Ratio	0.088	-	-	0.02	-
HCM Control Delay (s)	11	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Lake Urban Crossing
3: Runyan Lk Rd & White Lake Rd

2024 Background Condition
Timing Plan: PM Peak

Intersection										
Int Delay, s/veh	3.3									
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NEL	NER
Lane Configurations		↕			↕		↕		↕	
Traffic Vol, veh/h	43	233	30	42	268	36	15	22	15	13
Future Vol, veh/h	43	233	30	42	268	36	15	22	15	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-
Veh in Median Storage, #	-	0	-	-	0	-	0	-	0	-
Grade, %	-	0	-	-	0	-	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	53	285	37	51	328	44	18	27	18	16
Major/Minor	Major1	Major2		Minor2			Minor1			
Conflicting Flow All	372	0	0	322	0	0	879	350	911	304
Stage 1	-	-	-	-	-	-	452	-	410	-
Stage 2	-	-	-	-	-	-	427	-	501	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.22	7.12	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	6.12	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	3.318	3.518	3.318
Pot Cap-1 Maneuver	1186	-	-	1238	-	-	268	693	255	736
Stage 1	-	-	-	-	-	-	587	-	619	-
Stage 2	-	-	-	-	-	-	606	-	552	-
Platoon blocked, %		-	-		-	-				
Mov Cap-1 Maneuver	1186	-	-	1238	-	-	228	693	194	736
Mov Cap-2 Maneuver	-	-	-	-	-	-	228	-	194	-
Stage 1	-	-	-	-	-	-	555	-	585	-
Stage 2	-	-	-	-	-	-	542	-	447	-
Approach	EB	WB		SB			NE			
HCM Control Delay, s	1.1	1		14			15.9			
HCM LOS				B			C			
Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1		
Capacity (veh/h)	365	1186	-	-	1238	-	-	486		
HCM Lane V/C Ratio	0.094	0.044	-	-	0.042	-	-	0.181		
HCM Control Delay (s)	15.9	8.2	0	-	8	0	-	14		
HCM Lane LOS	C	A	A	-	A	A	-	B		
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0.1	-	-	0.7		

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	256	44	18	290	33	44
Future Vol, veh/h	256	44	18	290	33	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	303	52	21	344	39	52

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	355	0	715 329
Stage 1	-	-	-	-	329 -
Stage 2	-	-	-	-	386 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1204	-	397 712
Stage 1	-	-	-	-	729 -
Stage 2	-	-	-	-	687 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1204	-	388 712
Mov Cap-2 Maneuver	-	-	-	-	388 -
Stage 1	-	-	-	-	729 -
Stage 2	-	-	-	-	672 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	13.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	524	-	-	1204	-
HCM Lane V/C Ratio	0.174	-	-	0.018	-
HCM Control Delay (s)	13.3	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection

Int Delay, s/veh 3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NEL	NER
Lane Configurations		↕			↕		↕		↕	
Traffic Vol, veh/h	65	334	43	17	55	16	7	22	19	42
Future Vol, veh/h	65	334	43	17	55	16	7	22	19	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-
Veh in Median Storage, #	-	0	-	-	0	-	0	-	0	-
Grade, %	-	0	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	84	432	56	22	71	21	9	28	25	54

Major/Minor	Major1	Major2	Minor2	Minor1
Conflicting Flow All	92	0	0	488
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1503	-	-	1075
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1503	-	-	1075
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	SB	NE
HCM Control Delay, s	1.1	1.6	11	14.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	459	1503	-	-	1075	-	-	659
HCM Lane V/C Ratio	0.172	0.056	-	-	0.02	-	-	0.086
HCM Control Delay (s)	14.5	7.5	0	-	8.4	0	-	11
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.6	0.2	-	-	0.1	-	-	0.3

Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	137	47	23	152	29	20
Future Vol, veh/h	137	47	23	152	29	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	177	61	30	197	38	26

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	238	0	465
Stage 1	-	-	-	-	208
Stage 2	-	-	-	-	257
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1329	-	556
Stage 1	-	-	-	-	827
Stage 2	-	-	-	-	786
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1329	-	542
Mov Cap-2 Maneuver	-	-	-	-	542
Stage 1	-	-	-	-	827
Stage 2	-	-	-	-	766

Approach	EB	WB	NB
HCM Control Delay, s	0	1	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	632	-	-	1329	-
HCM Lane V/C Ratio	0.1	-	-	0.022	-
HCM Control Delay (s)	11.3	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection										
Int Delay, s/veh	3.5									
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NEL	NER
Lane Configurations		↕			↕		↕		↕	
Traffic Vol, veh/h	43	233	30	42	268	36	15	22	15	13
Future Vol, veh/h	43	233	30	42	268	36	15	22	15	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-
Veh in Median Storage, #	-	0	-	-	0	-	0	-	0	-
Grade, %	-	0	-	-	0	-	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	312	40	56	358	48	20	29	20	17

Major/Minor	Major1		Major2		Minor2		Minor1			
Conflicting Flow All	406	0	0	352	0	0	959	382	993	332
Stage 1	-	-	-	-	-	-	494	-	446	-
Stage 2	-	-	-	-	-	-	465	-	547	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.22	7.12	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	6.12	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	3.318	3.518	3.318
Pot Cap-1 Maneuver	1153	-	-	1207	-	-	237	665	224	710
Stage 1	-	-	-	-	-	-	557	-	591	-
Stage 2	-	-	-	-	-	-	578	-	521	-
Platoon blocked, %		-	-		-	-				
Mov Cap-1 Maneuver	1153	-	-	1207	-	-	196	665	163	710
Mov Cap-2 Maneuver	-	-	-	-	-	-	196	-	163	-
Stage 1	-	-	-	-	-	-	522	-	554	-
Stage 2	-	-	-	-	-	-	509	-	409	-

Approach	EB	WB	SB	NE
HCM Control Delay, s	1.2	1	15.3	17.3
HCM LOS			C	C

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	330	1153	-	-	1207	-	-	444
HCM Lane V/C Ratio	0.113	0.05	-	-	0.047	-	-	0.217
HCM Control Delay (s)	17.3	8.3	0	-	8.1	0	-	15.3
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0.2	-	-	0.1	-	-	0.8

Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	256	44	18	290	33	44
Future Vol, veh/h	256	44	18	290	33	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	331	57	23	375	43	57

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	388	0	781
Stage 1	-	-	-	-	360
Stage 2	-	-	-	-	421
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1170	-	363
Stage 1	-	-	-	-	706
Stage 2	-	-	-	-	662
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1170	-	354
Mov Cap-2 Maneuver	-	-	-	-	354
Stage 1	-	-	-	-	706
Stage 2	-	-	-	-	645

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	14.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	489	-	-	1170	-
HCM Lane V/C Ratio	0.204	-	-	0.02	-
HCM Control Delay (s)	14.2	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-



Appendix - E

BUILDOUT CONDITION

SYNCHRO RESULTS

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	100	0	0	66
Future Vol, veh/h	17	2	100	5	1	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	2	118	6	1	78

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	201	121	0	0	124	0
Stage 1	121	-	-	-	-	-
Stage 2	80	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	788	930	-	-	1463	-
Stage 1	904	-	-	-	-	-
Stage 2	943	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	787	930	-	-	1463	-
Mov Cap-2 Maneuver	787	-	-	-	-	-
Stage 1	904	-	-	-	-	-
Stage 2	942	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	800	1463
HCM Lane V/C Ratio	-	-	0.028	0.001
HCM Control Delay (s)	-	-	9.6	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Lake Urban Crossing
3: Runyan Lk Rd & White Lk Rd

2024 Build Condition
Timing Plan: AM Peak

Intersection										
Int Delay, s/veh	3.9									
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NEL	NER
Lane Configurations		↕			↕		↕		↕	
Traffic Vol, veh/h	65	334	43	17	55	16	7	22	19	42
Future Vol, veh/h	67	334	43	17	55	19	19	24	19	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-
Veh in Median Storage, #	-	0	-	-	0	-	0	-	0	-
Grade, %	-	0	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	79	396	51	20	65	23	23	28	23	50

Major/Minor	Major1	Major2	Minor2	Minor1
Conflicting Flow All	88	0	0	447
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1508	-	-	1113
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1508	-	-	1113
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	SB	NE
HCM Control Delay, s	1.1	1.5	12.7	13.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	490	1508	-	-	1113	-	-	536
HCM Lane V/C Ratio	0.147	0.053	-	-	0.018	-	-	0.13
HCM Control Delay (s)	13.6	7.5	0	-	8.3	0	-	12.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0.2	-	-	0.1	-	-	0.4

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	137	47	23	152	29	20
Future Vol, veh/h	146	50	23	154	30	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	173	59	27	182	36	24

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	232	0	439	203
Stage 1	-	-	-	-	203	-
Stage 2	-	-	-	-	236	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1336	-	575	838
Stage 1	-	-	-	-	831	-
Stage 2	-	-	-	-	803	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1336	-	562	838
Mov Cap-2 Maneuver	-	-	-	-	562	-
Stage 1	-	-	-	-	831	-
Stage 2	-	-	-	-	785	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	647	-	-	1336	-
HCM Lane V/C Ratio	0.092	-	-	0.02	-
HCM Control Delay (s)	11.1	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	94	0	94
Future Vol, veh/h	9	1	0	112	2	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	1	0	133	2	111

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	182	67	0	0	133	0
Stage 1	67	-	-	-	-	-
Stage 2	115	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	807	997	-	-	1452	-
Stage 1	956	-	-	-	-	-
Stage 2	910	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	806	997	-	-	1452	-
Mov Cap-2 Maneuver	806	-	-	-	-	-
Stage 1	956	-	-	-	-	-
Stage 2	909	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	822	1452
HCM Lane V/C Ratio	-	-	0.014	0.002
HCM Control Delay (s)	-	-	9.4	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Lake Urban Crossing
3: Runyan Lk Rd & White Lk Rd

2024 Build Condition
Timing Plan: PM Peak

Intersection										
Int Delay, s/veh	3.5									
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NEL	NER
Lane Configurations		↕			↕		↕		↕	
Traffic Vol, veh/h	43	233	30	42	268	36	15	22	15	13
Future Vol, veh/h	51	233	30	42	268	45	19	23	16	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-
Veh in Median Storage, #	-	0	-	-	0	-	0	-	0	-
Grade, %	-	0	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	276	36	50	318	53	23	27	19	15

Major/Minor	Major1	Major2	Minor2	Minor1
Conflicting Flow All	371	0	0	312
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1188	-	-	1248
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1188	-	-	1248
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	SB	NE
HCM Control Delay, s	1.3	0.9	14.6	16.1
HCM LOS			B	C

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	359	1188	-	-	1248	-	-	469
HCM Lane V/C Ratio	0.096	0.051	-	-	0.04	-	-	0.202
HCM Control Delay (s)	16.1	8.2	0	-	8	0	-	14.6
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0.1	-	-	0.7

Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	256	44	18	290	33	44
Future Vol, veh/h	259	45	18	297	35	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	307	53	21	352	41	52

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	360	0	728
Stage 1	-	-	-	-	334
Stage 2	-	-	-	-	394
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1199	-	390
Stage 1	-	-	-	-	725
Stage 2	-	-	-	-	681
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1199	-	381
Mov Cap-2 Maneuver	-	-	-	-	381
Stage 1	-	-	-	-	725
Stage 2	-	-	-	-	666

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	513	-	-	1199	-
HCM Lane V/C Ratio	0.182	-	-	0.018	-
HCM Control Delay (s)	13.6	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-

Intersection

Int Delay, s/veh 3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NEL	NER
Lane Configurations		↕			↕		↕		↕	
Traffic Vol, veh/h	65	334	43	17	55	16	7	22	19	42
Future Vol, veh/h	65	334	43	17	55	16	7	22	19	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-
Veh in Median Storage, #	-	0	-	-	0	-	0	-	0	-
Grade, %	-	0	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	84	432	56	22	71	21	9	28	25	54

Major/Minor	Major1	Major2	Minor2	Minor1
Conflicting Flow All	92	0	0	488
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1503	-	-	1075
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1503	-	-	1075
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	SB	NE
HCM Control Delay, s	1.1	1.6	11	14.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	459	1503	-	-	1075	-	-	659
HCM Lane V/C Ratio	0.172	0.056	-	-	0.02	-	-	0.086
HCM Control Delay (s)	14.5	7.5	0	-	8.4	0	-	11
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.6	0.2	-	-	0.1	-	-	0.3

Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	137	47	23	152	29	20
Future Vol, veh/h	137	47	23	152	29	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	177	61	30	197	38	26

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	238	0	465
Stage 1	-	-	-	-	208
Stage 2	-	-	-	-	257
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1329	-	556
Stage 1	-	-	-	-	827
Stage 2	-	-	-	-	786
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1329	-	542
Mov Cap-2 Maneuver	-	-	-	-	542
Stage 1	-	-	-	-	827
Stage 2	-	-	-	-	766

Approach	EB	WB	NB
HCM Control Delay, s	0	1	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	632	-	-	1329	-
HCM Lane V/C Ratio	0.1	-	-	0.022	-
HCM Control Delay (s)	11.3	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection										
Int Delay, s/veh	3.5									
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NEL	NER
Lane Configurations		↕			↕		↕		↕	
Traffic Vol, veh/h	43	233	30	42	268	36	15	22	15	13
Future Vol, veh/h	43	233	30	42	268	36	15	22	15	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	0	-	0	-
Veh in Median Storage, #	-	0	-	-	0	-	0	-	0	-
Grade, %	-	0	-	-	0	-	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	312	40	56	358	48	20	29	20	17

Major/Minor	Major1	Major2	Minor2	Minor1
Conflicting Flow All	406	0	0	352
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1153	-	-	1207
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1153	-	-	1207
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	SB	NE
HCM Control Delay, s	1.2	1	15.3	17.3
HCM LOS			C	C


Minor Lane/Major Mvmt	NELn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	330	1153	-	-	1207	-	-	444
HCM Lane V/C Ratio	0.113	0.05	-	-	0.047	-	-	0.217
HCM Control Delay (s)	17.3	8.3	0	-	8.1	0	-	15.3
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0.2	-	-	0.1	-	-	0.8

Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	256	44	18	290	33	44
Future Vol, veh/h	256	44	18	290	33	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	331	57	23	375	43	57

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	388	0	781
Stage 1	-	-	-	-	360
Stage 2	-	-	-	-	421
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1170	-	363
Stage 1	-	-	-	-	706
Stage 2	-	-	-	-	662
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1170	-	354
Mov Cap-2 Maneuver	-	-	-	-	354
Stage 1	-	-	-	-	706
Stage 2	-	-	-	-	645

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	14.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	489	-	-	1170	-
HCM Lane V/C Ratio	0.204	-	-	0.02	-
HCM Control Delay (s)	14.2	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-



Appendix – F
TRIP GENERATION, DISTRIBUTION
AND
ASSIGNMENT

Development: phase 1

Driveway: 1 Driveway 1 (Node 11)

Origin #	Route	To		From	
		Distribution %	Trips	Distribution %	Trips
1	Origin 1 (Node 8) to Driveway 1 (Node 11)	10.00	1	10.00	2
2	Origin 2 (Node 4) to Driveway 1 (Node 11)	32.57	2	14.07	3
3	Origin 3 (Node 1) to Driveway 1 (Node 11)	6.60	0	8.37	2
4	Origin 4 (Node 7) to Driveway 1 (Node 11)	10.07	1	17.87	3
5	Origin 5 (Node 5) to Driveway 1 (Node 11)	40.76	2	49.70	9

Development: Phase 1

Driveway: 1 Driveway 1 (Node 11)

Origin #	Route	To		From	
		Distribution %	Trips	Distribution %	Trips
1	Origin 1 (Node 8) to Driveway 1 (Node 11)	10.00	2	10.00	1
2	Origin 2 (Node 4) to Driveway 1 (Node 11)	40.78	8	43.48	4
3	Origin 3 (Node 1) to Driveway 1 (Node 11)	3.76	1	5.20	1
4	Origin 4 (Node 7) to Driveway 1 (Node 11)	8.27	2	10.40	1
5	Origin 5 (Node 5) to Driveway 1 (Node 11)	37.19	7	30.92	3

Development: phase 1

Driveway: 1 Driveway 1 (Node 11)

Origin #	Route	To		From	
		Distribution %	Trips	Distribution %	Trips
1	Origin 1 (Node 8) to Driveway 1 (Node 11)	10.00	1	10.00	2
2	Origin 2 (Node 4) to Driveway 1 (Node 11)	32.57	2	14.07	3
3	Origin 3 (Node 1) to Driveway 1 (Node 11)	6.60	0	8.37	2
4	Origin 4 (Node 7) to Driveway 1 (Node 11)	10.07	1	17.87	3
5	Origin 5 (Node 5) to Driveway 1 (Node 11)	40.76	2	49.70	9

Development: Phase 2

Driveway: 1 Driveway 1 (Node 10)

Origin #	Route	To		From	
		Distribution %	Trips	Distribution %	Trips
1	Origin 1 (Node 8) to Driveway 1 (Node 10)	14.29	1	11.28	2
2	Origin 2 (Node 4) to Driveway 1 (Node 10)	42.29	2	38.21	6
3	Origin 3 (Node 1) to Driveway 1 (Node 10)	9.09	0	8.72	1
4	Origin 4 (Node 7) to Driveway 1 (Node 10)	4.33	0	11.79	2
5	Origin 5 (Node 5) to Driveway 1 (Node 10)	30.00	2	30.00	5

Development: Phase 1

Driveway: 1 Driveway 1 (Node 11)

Origin #	Route	To		From	
		Distribution %	Trips	Distribution %	Trips
1	Origin 1 (Node 8) to Driveway 1 (Node 11)	10.00	2	10.00	1
2	Origin 2 (Node 4) to Driveway 1 (Node 11)	40.78	8	43.48	4
3	Origin 3 (Node 1) to Driveway 1 (Node 11)	3.76	1	5.20	1
4	Origin 4 (Node 7) to Driveway 1 (Node 11)	8.27	2	10.40	1
5	Origin 5 (Node 5) to Driveway 1 (Node 11)	37.19	7	30.92	3

Development: Phase 2

Driveway: 1 Driveway 1 (Node 10)

Origin #	Route	To		From	
		Distribution %	Trips	Distribution %	Trips
1	Origin 1 (Node 8) to Driveway 1 (Node 10)	14.48	2	10.00	1
2	Origin 2 (Node 4) to Driveway 1 (Node 10)	40.68	7	41.71	4
3	Origin 3 (Node 1) to Driveway 1 (Node 10)	3.39	1	12.80	1
4	Origin 4 (Node 7) to Driveway 1 (Node 10)	11.46	2	5.49	0
5	Origin 5 (Node 5) to Driveway 1 (Node 10)	30.00	5	30.00	3

**TYRONE TOWNSHIP PLANNING COMMISSION
REGULAR MEETING & PUBLIC HEARING SYNOPSIS
August 10, 2021 7:00 p.m.**

**Note: This meeting was held at the Tyrone Township Hall
Note: This meeting was recessed at 7:30 pm for a public hearing**

PRESENT: Kurt Schulze, Jon Ward, Dan Stickel, and Rich Erickson

ABSENT: Perry Green, Steve Krause, and Bill Wood

OTHERS PRESENT: Ross Nicholson

CALL TO ORDER: The meeting was called to order at 7:05 pm by Chairman Stickel.

PLEDGE OF ALLEGIANCE:

CALL TO THE PUBLIC: Chairman Stickel asked if there were any public comments not relating to an item on the agenda. Several public comments were received.

APPROVAL OF THE AGENDA: Approved as presented.

APPROVAL OF THE MINUTES:

- 1) 04/13/2021 Regular Meeting Minutes: Approved as presented.
- 2) 05/11/2021 Regular Meeting Minutes: Approved as presented.

OLD BUSINESS:

- 1) **Lake Urban Crossing Preliminary PUD:** The Planning Commission brought up the application documents and latest site plan up on the overhead screens. The applicant and authorized agent provided the Planning Commission and public in attendance with an overview and summary of their proposal. The Planning Commission briefly discussed the application. Chairman Stickel recessed the regular meeting and held a public hearing beginning at 7:31 pm to receive public comments regarding the proposed preliminary Planned Unit Development application. Public comments were received regarding concerns about potential impacts to property values, wildlife/environment, traffic, road conditions, stormwater runoff, loss of rural character, expansion of the public sanitary sewer system, etc... The public hearing was closed at 8:54 pm. Chairman Stickel resumed the regular meeting. No action was taken.

NEW BUSINESS:

- 1) **Vale Royal Barn Special Land Use Amendment:** The item was deferred.

CALL TO THE PUBLIC: Several public comments were received.

MISCELLANEOUS BUSINESS:

ADJOURNMENT: The meeting was adjourned at 9:04 by Chairman Stickel.

**TYRONE TOWNSHIP PLANNING COMMISSION
REGULAR MEETING SYNOPSIS**

November 30, 2021 7:00 p.m.

**Note: This meeting was held at the Tyrone Township Hall
And via remote access (Zoom)**

PRESENT: Kurt Schulze, Rich Erickson, Steve Krause, Garrett Ladd, and Chet Shultz

ABSENT: Jon Ward (present via Zoom) and Bill Wood

OTHERS PRESENT: Ross Nicholson and Zach Michels

CALL TO ORDER: The meeting was called to order at 7:00 by Chairman Erickson.

PLEDGE OF ALLEGIANCE:

CALL TO THE PUBLIC: The Planning Commission heard several questions and comments from members of the public.

APPROVAL OF THE AGENDA: Approved as presented.

APPROVAL OF THE MINUTES:

1) 06/08/2021 Regular Meeting Minutes: Approved as presented.

2) 07/13/2021 Regular Meeting and Public Hearing Minutes: Approved as presented.

OLD BUSINESS:

- 1) Lake Urban Crossing Preliminary PUD Plan:** Zach Michels read through the latest review letter he had prepared for the application. The Planning Commission discussed the application. The Planning Commission recommended Township Board approval of the preliminary PUD plan with conditions.

- 2) Master Plan Discussion:** Zach Michels read through and elaborated on a document he had prepared designed to outline the master planning process and aid the Planning Commission. The Planning Commission discussed and provided direction to Zach Michels. It was determined that Master Plan discussion will be included on each regular meeting agenda moving forward until the process has been completed.

NEW BUSINESS:

- 1) Niemi Shared Private Driveway:** Zach Michels read through the latest review letter he had prepared for the application. The Planning Commission discussed the application. The Planning Commission provided direction to the applicant. The Planning Commission recommended scheduling the public hearing for the application. No action was taken.

CALL TO THE PUBLIC: The Planning Commission heard several questions and comments from members of the public.

MISCELLANEOUS BUSINESS: Zach Michels took a few moments to touch on several topics discussed earlier in the meeting.

ADJOURNMENT: The meeting was adjourned at 9:33 by Chairman Erickson.

NEW BUSINESS #1

Speaker Larry Gawthrop, CFAO, Mott Community College.

Lawrence Gawthrop

- Chief Financial & Administrative Officer - CFAO
- Chief Financial Officer
- larry.gawthrop@mcc.edu



Primary areas of responsibility:

- Financial management leadership for the College
 - Oversight of all accounting and budgeting functions — general ledger, accounts payable and receivable, grant fiscal management, accounting for Foundation for MCC , Bruin Club and other outside agencies
 - Cash and investment decisions
 - Debt management; Bond Issuance
 - Budget planning and integration of strategic plans with resource allocation
 - Long and short-term financial forecasting
 - Oversight of internal and external audits
 - Cost and revenue analyses of current and proposed activities
 - Monthly Financial Reporting to Board and Subcommittees
 - Ensure compliance with regulatory, contractual, and accounting standards

NEW BUSINESS #2

Niemi Shared Private Driveway

Terri Medor

From: Ross Nicholson
Sent: Wednesday, January 12, 2022 1:46 PM
To: Marcella Husted; Terri Medor
Cc: Karie Carter; Planning Chair; Richard Erickson; Marian Krause; kaschulze@charter.net
Subject: Agenda Request Niemi Shared Private Driveway
Attachments: Niemi Shared Private Driveway Rec for Approval 1-12-22.pdf; PC Meeting and PH Synopsis 01-11-2022.docx; Niemi SPD.pdf; Niemi Shared Driveway Planning Report (11042021).pdf; NIEMI Contours 2ft.pdf; Driveway.zip; Tyrone Twp letter (Mark Niemi).docx; Shared Private Driveway Maintenance Agreement.docx

Importance: High

Marcie & Terri,

I have attached the letter of recommendation and supporting documents for a proposed shared private driveway as part of a proposed land division of Parcel # 4704-21-100-010 (located near the end of Indian View Trail on the west side abutting the cul-de-sac). The subject property is ~10-acres, zoned FR. The proposed land division would result in two new ~5-acre parcels, both taking access from the proposed shared private driveway.

The required public hearing for the application was held on 01/11/2022 at 7:30 pm. During the same meeting, the Planning Commission moved to recommend approval of the proposed shared private driveway with two conditions (motion below). I have included notes below for clarification of the conditions.

Motion (notes in red):

Steve Krause made a motion to recommend Township Board approval of the Niemi Shared Private Driveway application with the following conditions:

-The maintenance agreement must be provided in a recordable format.

The Planning Commission has not requested any additional revisions to the content of the maintenance agreement. They requested that the applicant verify with the Livingston County Register of Deeds that the attached version can be accepted and recorded OR make any required formatting revisions and submit to the Township prior to recording. Verification that the maintenance agreement is in recordable format is required as part of the land division application. If approved, the maintenance agreement must be recorded concurrent with the survey for the land division.

-The applicant must comply with the request from the City of Fenton Fire Chief dated 11/23/2021 (as follows): "all addresses that are serviced by the private drive be marked with appropriate signage at the road. Additionally at every drive off the sharded driveway each address should be identified."

If the Board grants approval of the proposed shared private driveway, the motion should include this condition as it cannot be completed until both resulting parcels have been issued addresses (addresses may only be issued following approval of the land use permits for construction of single-family dwellings on each parcel). The letter from Chief Cairnduff is attached to this email for reference.

Jon Ward supported the motion. Motion carried by unanimous voice vote.

Attachments:

1. Recommendation Letter
2. Synopsis from the 01/11/2022 Planning Commission meeting and public hearing
3. Original shared private driveway application
4. Latest CWA review letter for shared private driveway application
5. GIS approximate elevation contours for the subject property
6. Shared private driveway plans and cross-section drawing (Zipped- 2 files)
7. 11/23/2021 Letter from Chief Cairnduff (City of Fenton Fire Department)
8. Latest shared private driveway maintenance agreement (content OK, reformatting may be required)

Please let me know if you require any additional information prior to placing on the Board agenda.

Best regards,

Ross Nicholson

Planning & Zoning Administrator

Tyrone Township
8420 Runyan Lake Rd.
Fenton, MI 48430
phone: (810) 629-8631
fax: (810) 629-0047



www.tyronetownship.us

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Township Board
Tyrone Township
8420 Runyan Lake Road
Fenton, MI 48430

Subject: Agenda Request, Niemi Shared Private Driveway Recommendation for Approval

Dear Township Board Members:

At our Planning Commission meeting held 1/11/2022 the Planning Commission supported a favorable recommendation of the Niemi Shared Private Driveway Application

Motion:

Steve Krause made a motion to recommend Township Board approval of the Niemi Shared Private Driveway application with the following conditions:

- The maintenance agreement must be provided in a recordable format
- The applicant must comply with the request from the City of Fenton Fire Chief dated 11/23/2021 (as follows): "all addresses that are serviced by the private drive be marked with appropriate signage at the road. Additionally at every drive off the sharded driveway each address should be identified."

Jon Ward supported the motion. Motion carried by unanimous voice vote.

Item of Note:

Mr. Robert Cairnduff in his letter dated 11/23/2021 also stated: "There is not a sufficient water source in the area that would make a dry hydrant possible. The access provided on Indian View Trail and the turn around at the end of the road make access for our fire trucks possible."

Regards,

Rich Erickson

Chairman -Tyrone Township Planning Commission

**TYRONE TOWNSHIP PLANNING COMMISSION
REGULAR MEETING & PUBLIC HEARING SYNOPSIS
January 11, 2022 7:00 p.m.**

**Note: This meeting was held at the Tyrone Township Hall with remote access via Zoom
Videoconferencing.**

Note: This meeting was recessed at 7:30 pm for a public hearing.

PRESENT: Kurt Schulze, Jon Ward, Steve Krause, and Rich Erickson

ABSENT: Bill Wood, Chet Schultz, and Garrett Ladd

OTHERS PRESENT: Ross Nicholson and Zach Michels (CWA)

CALL TO ORDER: The meeting was called to order at 7:00 pm

PLEDGE OF ALLEGIANCE:

CALL TO THE PUBLIC: Several public comments were received.

APPROVAL OF THE AGENDA: New Business item #2 (Private Road Standards) was moved ahead of all other business items.

APPROVAL OF THE MINUTES:

- 1) 08/10/2021 Regular Meeting & Public Hearing Minutes: Approved as amended.
- 2) 08/18/2021 Regular Meeting Minutes: Approved as presented.

NEW BUSINESS #2: Private Road Standards

The Planning Commission briefly discussed a request from the Runyan Lake Heights Association to consider partial paving of a private road within the subdivision. Zach Michels indicated that the Zoning Ordinance allows for modifications of private road standards for safety purposes. The Planning Commission briefly discussed what information they would need from the Association to consider the request. The Planning Commission determined that they would need plans and a written description in accordance with the standards in Article 24 of the Zoning Ordinance to make a determination. No action was taken.

The regular meeting was recessed at 7:30 pm to hold the scheduled public hearing.

PUBLIC HEARING #1: Niemi Shared Private Driveway

Zach Michels summarized the application and read through the review letter. The Planning Commission briefly discussed the application. A public comment was received.

PUBLIC HEARING #2: Sultani Caregiver Special Land Use

Zach Michels summarized the application and read through the review letter. The Planning Commission briefly discussed the application. A number of public comments were received.

OLD BUSINESS #1: Niemi Shared Private Driveway

The Planning Commission briefly discussed the application documents. The Planning Commission recommended Township Board approval with conditions.

OLD BUSINESS #2: Master Plan

The Planning Commission discussed possible survey options for the master planning process. It was determined that the primary focus of the next workshop meeting would be to focus on master plan survey questions and timelines for the master planning process.

NEW BUSINESS #1: Sultani Caregiver Special Land Use

The Planning Commission discussed the application amongst themselves and the applicants. They provided direction to the applicants/agents, requesting additional information and revisions to the site plan. The item was tabled pending the receipt of the requested information.

CALL TO THE PUBLIC: Several public comments were received.

MISCELLANEOUS BUSINESS:

Next Workshop Meeting: The next Workshop meeting was scheduled for Wednesday, 01/19/2022, beginning at 6:00 pm.

ADJOURNMENT: The meeting was adjourned at 9:44 pm.



Carlisle | Wortman
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

November 4, 2021

Shared Private Driveway Review for Tyrone Township, Michigan

PETITION INTRODUCTION

Applicant: Mark Niemi (*agent*)
Owner: Mark Niemi
Plan Date: May 14, 2021 (*survey*)
Request: Shared private driveway

PETITION DESCRIPTION

The applicant is requesting approval of a shared private driveway to provide access for a proposed land division.

Shared private driveways can provide access for up to 4 single-family lots, site condominium units, or non-residential principal buildings and can have a maximum length of up to 1,200 feet.

The proposed shared private driveway could provide access for up to 2 lots.

The proposed shared private driveway would have access from Indian View, an existing private road. Indian View connects with Center to the north.

The Zoning Ordinance outlines the process and design standards for shared private driveways and the process and limitations for the expansion (*length or number of lots*) of private roads, including shared private driveways connected to existing private roads.

This review does not examine the proposed land division, but it should be noted that lot areas should exclude the shared private driveway easement.

The application is not complete at this time, but the Planning Commission can provide some guidance to the applicant.

PROPERTY INFORMATION

Address: None
Location: West of Indian View, south of Center
Parcel Number: 04-21-100-010
Lot Area: ~9.9 acres (gross)
Frontage: ~428 feet
Existing Land Use: Vacant/woodlands

Aerial of the Site



ZONING

The property is within the FR Farming Residential zoning district. The intent of that district is below.

Zoning per Zoning **FR Farming Residential**

Map: *The intent of the FR Farming Residential District is to protect lands best suited to agricultural uses from the encroachment of incompatible uses, while designating an area appropriate to the type of single family residential development that does not alter the general agricultural character of the district. Moreover, the intent also is to protect vital natural resources, including wetlands, inland lake water quality, groundwater supplies, fertile and stable soils, and significant stands of wood lots and vegetative cover. Lands in the FR and RE District are not likely to be served with centralized public water and sewer facilities.*

Current Zoning Map



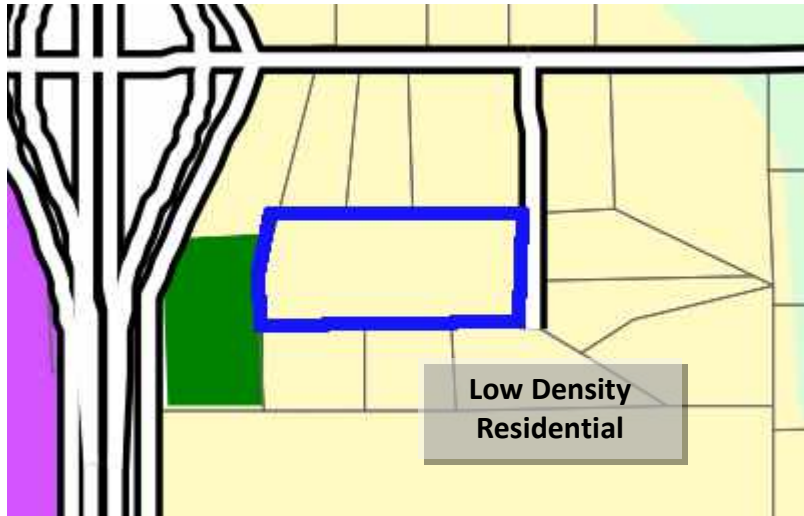
Comments: *Although not directly a part of the shared private driveway application, the proposed properties appear generally consistent with the developmental standards of the FR Farming Residential zoning district. Future surveys should describe both the gross and net lot area.*

FUTURE LAND USE MAP

Future Land Use Map **Low Density Single Family Detached Residential**

This category will permit single family residential development at a density of 1.5 to 3 acres per dwelling unit. This designation can be found in portions of the southeast part of the Township, where residential uses are appropriate but higher densities are not advisable due to infrastructure concerns.

Future Land Use Map



Comments: Although not directly a part of the shared private driveway application, the proposed properties appear consistent with the Future Land Use Map.

SURROUNDING PROPERTIES

The surrounding properties are primarily residential uses with a public use, as noted below.

	North	East	South	West
Surrounding Zoning	<i>FR Farming Residential</i>	<i>FR Farming Residential</i>	<i>FR Farming Residential</i>	<i>FR Farming Residential</i>
Surrounding Land Uses	<i>Houses</i>	<i>Houses</i>	<i>Houses</i>	<i>Township Hall</i>
Future Land-Use Map	<i>Low Density Single Family Residential</i>	<i>Low Density Single Family Residential</i>	<i>Low Density Single Family Residential</i>	<i>Low Density Single Family Residential, Public/Quasi Public</i>

PRIVATE ROAD EXPANSION

The proposed shared private driveway will have access from an existing private road.

The existing private road has a length of roughly 1,008 feet from Center Road to the north and provides access for 9 existing lots (*10 lots following division*).

Limits are placed on the expansion of existing private roads, including physical extension of a private road (*length*), providing access to additional lots (*number of lots*), or the addition of shared private driveways with access from the private road.

A private road with a single access point can have a maximum length of 1,200 feet, including the length of any shared private driveways. The Township can allow a greater length, if a dry hydrant system is installed. (*§24.03(G) Maximum Length and Units, Single Access Point*)

Private roads with a single access point can provide access for a maximum of 30 lots, including lots with shared private driveways from the private road. The Township can reduce that number based on local conditions. With the proposed division, Indian View would provide access to less than 30.

Comments: *The proposed shared private driveway would result in a length of roughly 1,517 feet, which is greater than the 1,200 feet allowed (shared private driveway plus private road with a single access point).*

A longer distance may be approved by the Township Board, upon recommendation by the Planning Commission, if a dry hydrant system approved by the Township Engineer and fire department is installed. We recommend the Township consult with the fire department with jurisdiction in this area if it wishes to consider allowing a longer length.

SHARED PRIVATE DRIVEWAY APPROVAL PROCESS

The approval process for shared private driveways is outlined in §24.05 Shared Private Driveway and Access Easement Approval Requirements.

The Planning Commission holds a public hearing and provides a recommendation to the Township Board. The applicant may be directed to provide additional information deemed necessary to review the application.

An applicant must provide a site plan/engineering plan of the proposed shared private driveway, as outlined in §24.05(J) Review Process, and a maintenance agreement, as outlined in §24.05(B) Maintenance Agreement and 24.02(C) Maintenance Agreement.

Comments: *It is difficult to provide comment on the current sketch that has been provided, as it does not include most of the information that should be included in a shared private driveway plan. A plan should be provided that includes at least the basic information to provide further guidance.*

The draft maintenance agreement that has been provided does not appear to be in a recordable form nor does it appear to clearly address access rights or limits or location of utilities within the easement.

We defer comment on details of the maintenance agreement to the Township attorney.

SHARED PRIVATE DRIVEWAY DESIGN STANDARDS

Design standards for shared private driveways are outlined in §24.06 Shared Private Driveway and Access Easement Design Standards of the Zoning Ordinance and are examined below. The Planning Commission may recommend approval of a modified shared private driveway design standard where it can be demonstrated that the modified standard meets safety and sound engineering requirements.

- A. Design of Shared Private Driveways.** A shared private driveway shall be designed and constructed consistent with the standards adopted herein and by the Livingston County Road Commission standards for public roads except the requirement for bituminous pavement as modified in this Article by Tyrone Township. In the event of conflict between standards, the higher standard, as determined by the Planning Commission, shall prevail. The design of a shared private driveway shall be subject to approval by the Township. When the developer of a proposed shared private driveway owns an additional access point for a lot along the adjacent public or private road, the additional access point shall be removed and the lot shall be accessed from the shared private driveway. This standard may be waived where it is determined that the access point does not have a negative impact on traffic or safety along the main road and that compliance would be a burden to the site, the resources on it, its configuration, and/or the property owners.

Comments: At this time, no engineering details for the proposed shared private driveway have been provided. A cross section and other design details should be provided as part of the application to allow review for consistency with this standard.

To the best of our knowledge, the applicant does not own any adjacent access points that should be removed.

We defer further comment related to public road standards to the Township Engineer and the Road Commission.

- B. Drainage.** Shared private driveways shall be designed and constructed in relation to existing land contours and other natural or man-made features to assist in providing controlled drainage for the shared private driveway in accordance with Township and County requirements. A drainage bypass culvert may be required where a shared private driveway intersects with a road. All other drainage improvements shall be required as determined necessary by the site drainage patterns and be consistent with established Township policy, the requirements of the Livingston County Road Commission and Drain Commissioner, and sound engineering practices.

Comments: At this time, no engineering details have been provided, including the location of the proposed shared private driveway within the proposed easement, topography, or proposed drainage improvements.

We defer further comment related to drainage to the Township Engineer

- C. Sight-Distance.** Shared private driveways shall be designed and constructed in relation to existing land contours and other natural or man-made features to provide safe and adequate vision for drivers using a shared private driveway access. A shared private driveway intersection with a road shall meet the sight distance requirements of the Livingston County Road Commission for driveways and road approaches. Other traffic safety improvements shall be required as determined necessary to be consistent with established Township policy, the requirements of the Livingston County Road Commission, and sound planning and engineering practices. If the area to be maintained in order to meet the sight distance requirement extends onto adjacent property, then easements shall be secured for the purposes of clearing and maintaining the area for compliance with this requirement. If easements cannot be secured, the access point will have to be relocated. Provisions for maintenance of

areas required for sight-distance shall be included in the shared private driveway and access easement maintenance agreement (see Section 24.05.B).

Comments: *At this time, no design details have been provided as part of the application. Design information, such as sight distances, should be provided in order to determine consistency with this standard.*

We defer additional comment to the Township Engineer and Road Commission.

- D. Minimum Easement Width.** The minimum width of the easement for a shared private driveway shall be sixty-six (66) feet.

Comments: *The proposed easement width, as shown in the survey dated May 14, 2021, would be 66 feet wide.*

- E. Minimum Finished Surface Width.** The finished, load-bearing surface of a shared private driveway shall be not less than twenty (20) feet in width. Subject to the Township's approval, a shared private driveway may have a finished, loadbearing surface of not less than sixteen feet in width, plus two (2) load-bearing shoulders, each two (2) feet wide. Those shared private driveways served by hydrants shall have a finished, load-bearing surface of not less than twenty-six (26) feet. This width may be reduced to twenty (20) feet at the discretion of the Planning Commission provided that bump-outs, which are a minimum of twenty-six (26) feet in width, are provided at least once every 300 feet.

Comments: *At this time, no design details have been provided as part of the application. Design information, including width of the finished surface, should be provided in order to determine consistency with this standard.*

- F. Shared Private Driveway Construction Materials.** The surface of a shared private driveway shall be constructed on a base of not less than six (6) inches of road gravel. The base shall be laid after removal of all unsuitable soil. Unsuitable soil shall be replaced with road gravel or other material as may be specified by the Township Engineer. The Township Engineer may also specify the installation of soil stabilization devices, sub-base, or underlying fabric and drainage facilities to better assure the long-term life of the shared private driveway.

Comments: *At this time, no design details have been provided as part of the application. Design information, including surface material, base material, soil information, and any necessary soil stabilization devices, should be provided in order to determine consistency with this standard.*

- G. Maximum Length and Units.** Maximum length of a shared private driveway shall be one thousand, two hundred (1,200) feet with a maximum of four (4) lots or dwelling units served by the shared private driveway. The maximum length requirement may be extended upon the recommendation of the Planning Commission and the approval of the Township Board. Shared private driveways that exceed the one thousand, two hundred (1,200) foot maximum length shall be required to install a dry hydrant system. The system shall be subject to the approval of the Township engineer and fire department with jurisdiction.

Comments: *The proposed shared private driveway itself would be less than 1,200 feet in length and would provide access for less than 4 lots.*

The length of the proposed shared private driveway and the existing private road would exceed 1,200 feet in length. See the "Private Road Expansion" section of this report for more details.

- H. Turnarounds.** Any shared private driveway serving more than three (3) lots or dwelling units shall include a circular cul-de-sac turnaround or a "T" turnaround. The Planning Commission shall determine the type of turnaround required. Cul-de-sacs and "T" turnarounds shall be in accordance with these standards and LCRC geometric design requirements. This requirement may be waived if the shared private driveway is 150 feet or less in length.

Comments: *The proposed shared driveway will only serve 2 dwelling units, so a circular cul-de-sac or t-turnaround is not required.*

However, it is our understanding that the International Fire Code generally requires some type of turnaround when an accessway is longer than 300 feet to ensure fire apparatus are able to access the site.

If a turnaround is not provided, it would likely limit or prohibit garbage truck access to the proposed western lot.

We defer further comments to the Township Engineer and Fire Inspector.

- I. Circular Cul-De-Sac Turnaround Design.** When a circular cul-de-sac turnaround is required for installation by the Planning Commission, the turnaround shall be designed with a forty-five (45) foot radius if no internal landscape island is required or with a fifty-five (55) foot radius if a center landscaped island is required. Where required, the internal landscape island shall be located in the center of the turnaround and shall be twenty (20) feet in diameter. A larger turnaround may be required for commercial and industrial shared private driveways.

Comments: *The application does not call for a circular cul-de-sac turnaround. This standard would only apply if the applicant proposes a circular cul-de-sac turnaround or if the Planning Commission determines a circular cul-de-sac turnaround is required.*

- J. "T" Turnaround Design.** When a "T" or "hammerhead" turnaround is required for installation by the Planning Commission, the turnaround shall provide perpendicular extensions from the main traveled surface of the shared private driveway to permit a vehicle to turn around. The extensions shall be not less than twenty (20) feet in width and extend from each side of the centerline of the easement for a distance of sixty (60) feet. A turning radius of twenty-eight (28) feet shall be provided from the traveled surface onto the turnaround. The surface and base materials of the "T" turnaround shall be the same as the surface and base materials of the shared private driveway.

Comments: *The application does not call for a t/hammerhead turnaround. This standard would only apply if the applicant proposes a t/hammerhead turnaround or if the Planning Commission determines a t/hammerhead turnaround is required.*

- K. Intersection Design Standards.** Shared private driveways that intersect with existing or proposed private roads or public street rights-of-way should intersect at a ninety (90) degree angle. Where constrained by environmental features, the Township Engineer may allow a reduced angle of intersection but in no case shall the angle be less than seventy (70) degrees.

Comments: *At this time, no design details have been provided as part of the application. Design information, including details of the proposed geometry where the proposed shared driveway connects with Indian View, should be provided in order to determine consistency with this standard.*

- L. Intersection Offsets from Streets.** Proposed shared private driveway intersections with a public or private road shall align directly across from, or be offset by at least two hundred fifty (250) feet from existing intersections of public streets or private roads on the opposite side of the street, measured centerline to centerline. This standard may be reduced if approved by the Livingston County Road Commission and the Tyrone Township Board of Trustees, with recommendation from the Planning Commission.

Comments: *The proposed shared private driveway is more than 250 feet from intersections with any public or private street.*

- M. Vertical Clearance.** In order to provide adequate access for emergency vehicles, fifteen (15) feet of overhead tree clearance shall be provided within the width of the finished surface.

Comments: *At this time, no design details have been provided as part of the application. Design information, including details about vertical clearance, should be provided in order to determine consistency with this standard.*

- N. Signs.** Regulatory signs shall be positioned and installed in accordance with the Michigan Manual of Uniform Traffic Control Devices on all shared private driveways where such driveways intersect with public or private roads. All other signs within the shared private driveway easement shall be identified on the site plan and designed and placed in accordance with the Michigan Manual of Uniform Traffic Control Devices, unless the Planning Commission approves another type of design for consistency with the character of the development. Shared private driveways shall not be named and shall not have signs bearing street names.

Comments: *At this time, no design details have been provided as part of the application. Design information, including details about proposed regulatory signs, should be provided in order to determine consistency with this standard.*

We defer comment to the Township Engineer as to what traffic control signs would be appropriate.

- O. Modifications of These Standards.** At the discretion of the Planning Commission and Township Board, the standards of this article may be modified. The Planning Commission and Township Board may determine that alternative design or construction materials will provide a shared private driveway of equal or superior quality. Further, the Planning Commission and Township Board shall have the authority to modify the review requirements in order to assure the requirements of the Township are considered in an appropriate forum and with the necessary level of professional design expertise.

Comments: *Information about the design of the proposed shared private driveway has not been provided, so it is not possible to provide comment about potential modifications or determine if an alternative design or construction materials would be of equal or superior quality at this time.*

- P. Compliance with AASHTO Standards.** Where no specific standard is provided in this Section, shared private driveway design plans shall meet the design criteria for local rural roads described in the most

recent edition of the American Association of State Highway and Transportation Officials (AASHTO) Manual "A Policy on Geometric Design for Highways and Streets." Minimum horizontal and vertical curve radii and stopping distances shall be determined using design standards in this AASHTO manual to provide minimum safe sight-distances, provided that the minimum horizontal curve shall be two-hundred and thirty (230) feet in radius.

Comments: *At this time, no design details have been provided as part of the application. Design information, including details about horizontal and vertical curve radii, should be provided in order to determine consistency with this standard.*

We defer additional comment to the Township Engineer.

- Q. Conversion of Shared Private Driveway to Private Road.** Any proposal to modify the use of a shared private driveway so that the shared private driveway will serve the functional capacity of a private road...

Comments: *The application does not call for the conversion of a shared private driveway to a private road. This standard does not apply.*

- R. Setbacks and Structures.** Shared private driveways shall not be considered streets. However, on lots where the only means of access is a shared private driveway and there is no street frontage, the yard fronting on the shared private driveway shall be considered the front yard for zoning and setback purposes. On lots where the only means of access is a shared private driveway and there is street frontage, the lot shall be treated as a corner lot (i.e. a lot with two front yards) for zoning and setback purposes.

Comments: *Future surveys used for the proposed land division should accurately show the setbacks as described above.*

- S. Adjacent Properties.** For shared private driveways built after the effective date of this amendment (April 30, 2008) and located on a property line, access to that shared private driveway is encouraged to be provided to the adjacent property. The developer or owner of the adjacent property shall petition the owner(s) of the shared private driveway(s) located on the adjacent property to request a forum to discuss and negotiate access to, and use of, the existing shared private driveway(s). However, where such access is granted and will exceed the maximum number of lots permitted on a shared private driveway, the shared private driveway shall be converted to a private road per paragraph P above.

Comments: *We have no information whether or not the applicant/owner has petitioned the owners of the existing adjacent private shared driveway to explore potential use. If such use were granted, it appears that the resulting shared private driveway would provide access for up to 4 lots.*

We recommend the applicant/owner approach the adjacent property owners and provide proof of that contact and the response with the Township.

- T. Nonconforming Shared Private Driveways.** Nonconforming shared private driveways may be modified in conformance with the requirements in Section 24.04. Where necessary to accommodate shared private driveways versus private roads, the standards may be modified by the Township.

Comments: *The application does not call for modifying an existing nonconforming shared private driveway. This standard does not apply.*


SUMMARY & COMMENTS

The proposed shared private driveway application is not complete at this time.

This review does not examine the proposed lots.

Some guidance and areas for Planning Commission discussion are outlined below.

- 1) *A plan should be provided that is generally consistent with §24.05(J) Review Process.*
- 2) *The applicant should provide proof of an attempt to get permission to use the shared private driveway immediately south of the proposed shared private driveway.*
- 3) *Planning Commission should discuss whether it might consider making a favorable recommendation for a length (private road and shared private driveway) of greater than 1,200 feet, if a dry hydrant system is installed.*
- 4) *A maintenance agreement consistent with §24.05(B) Maintenance Agreement and §24.02(C) Maintenance Agreement should be provided in a recordable form for review by the Township Attorney.*
- 5) *Access for the proposed eastern lot should be clarified.*
- 6) *The plan should be shared with the Fire Inspector for additional comment.*



CARLISLE/WORTMAN ASSOC., INC.
Zach Michels, AICP
Planner



City of Fenton Fire Department

205 East Caroline Street
Fenton, MI 48430
(810) 629-8595
Emergency Dial 911

11/23/2021

Ross Nicholson
Tyrone Township
Planning and Zoning Administrator

RE: Mr. Niemi Shared drive off Indian View Trail

Dear Mr. Nicholson,

I have reviewed the information provided by Mr. Niemi regarding the proposed shared drive off Indian View Trail. After reviewing the provided information and speaking to Mr. Niemi and yourself I see no reason to deny the request.

There is not a sufficient water source in the area that would make a dry hydrant possible. The access provided on Indian View Trail and the turn around at the end of the road make access for our fire trucks possible.

The only item I would request is that all addresses that are serviced by the private drive be marked with appropriate signage at the road. Additionally at every drive off the sharded driveway each address should be identified.

Should you have any questions, please contact my office at 810-629-8595.

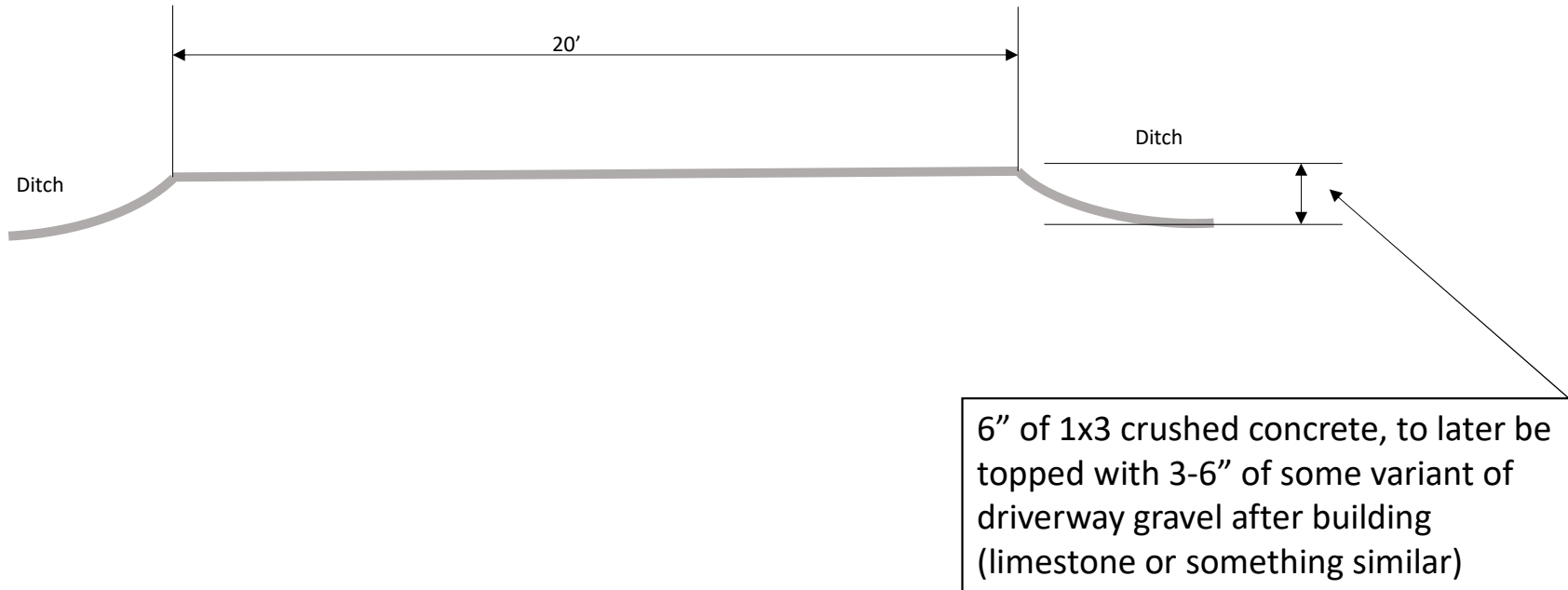
Sincerely,

Robert Cairnduff

Robert C. Cairnduff
Fire Chief

Drive Way Section
Mark Niemi
Indian View Trail,
Fenton, MI, 48430

20' wide cap, current driveway that is
installed is currently 20' and meets
standard





Shared Private Driveway Maintenance

Legal description of Parcel A

PARCEL A:

PART OF THE NORTHWEST 1/4 OF SECTION 21, T4N, R6E, TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 21; THENCE S87°18'55"W 929.21 FEET ALONG THE NORTH LINE OF SECTION 21 AND THE CENTERLINE OF CENTER ROAD; THENCE S02°37'09"E 579.89 FEET TO THE POINT OF BEGINNING; THENCE S02°37'09"E 428.14 FEET; THENCE S87°16'18"W 509.82 FEET; THENCE N02°37'09"W 428.37 FEET; THENCE N87°17'48"E 509.82 FEET TO THE POINT OF BEGINNING, CONTAINING 5.01 ACRES, MORE OR LESS, SUBJECT TO AND INCLUDING THE USE OF A 66 FOOT WIDE EASEMENT "A" AND ALSO BEING SUBJECT TO AND INCLUDING THE USE OF A 66 FOOT WIDE INGRESS & EGRESS EASEMENT "B".

Legal description of Parcel B

PARCEL B:

PART OF THE NORTHWEST 1/4 OF SECTION 21, T4N, R6E, TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 21; THENCE S87°18'55"W 929.21 FEET ALONG THE NORTH LINE OF SECTION 21 AND THE CENTERLINE OF CENTER ROAD; THENCE S02°37'09"E 579.89 FEET; THENCE S87°17'48"W 509.82 FEET TO THE POINT OF BEGINNING; THENCE S02°37'09"E 428.37 FEET; THENCE S87°16'18"W 531.77 FEET; THENCE N03°05'55"W 162.48 FEET; THENCE N12°58'00"E 276.40 FEET; THENCE N87°17'48"E 458.87 FEET TO THE POINT OF BEGINNING, CONTAINING 5.01 ACRES, MORE OR LESS, BEING SUBJECT TO AND INCLUDING THE USE OF A 66 FOOT WIDE EASEMENT "A".

Creation of Shared Private Driveway

The legal owners of the legally described parcels herein ("the **Benefited Parcels**") hereby grant and convey to each other a 66 foot wide ingress and egress easement for a shared private driveway, the easement being described as follows:

A nonexclusive ingress and egress 66 foot wide easement for shared private driveway purposes, further described as:

66 FOOT INGRESS & EGRESS EASEMENT "A"

PART OF THE NORTHWEST 1/4 OF SECTION 21, T4N, R6E, TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE NORTH 1/4 CORNER S87°18'55"W 929.21 FEET TO THE POINT OF BEGINNING; THENCE S02°37'09"E 1007.98 FEET TO THE CENTER OF A 70 FOOT RADIUS CUL-DE-SAC.

66 FOOT INGRESS & EGRESS EASEMENT "B"

PART OF THE NORTHWEST 1/4 OF SECTION 21, T4N, R6E, TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE NORTH 1/4 CORNER S87°18'55"W 929.21 FEET; THENCE S02°37'09"E 1008.03; THENCE S87°16'18"W 70.00 FEET TO THE POINT OF BEGINNING; THENCE S87°16'18"W 439.82 FEET; THENCE N02°37'09"W 66.00 FEET; THENCE N87°16'18"E 476.81 FEET; THENCE S02°37'09"E 4.20 FEET; THENCE 75.73 FEET ALONG A 70.00 FOOT RADIUS CURVE TO THE LEFT, CHORD BEARING S28°15'46"W 72.09 FEET TO THE POINT OF BEGINNING.

located in Tyrone Township, Livingston County, Michigan. The owners of the *Benefited Parcels* shall use the shared private driveway easement for the purposes of vehicle ingress and egress, including public and emergency vehicles, and for the placement of public utilities to benefit their parcels. Use of this easement is limited to the *Benefited Parcels*.

Maintenance

The shared private driveway easement shall be constructed and maintained in accordance with Tyrone Township standards. The cost of construction (if applicable) and maintenance shall be shared equally between both parcels where the cost of driveway construction can be added to sale price of land. The shared private driveway easement shall be maintained in a good state of repair not less than that required by Tyrone Township at the time of the creation of the shared private driveway easement. Tyrone Township and Livingston County shall not be responsible for maintenance, or the cost thereof.

No capital expenditures exceeding \$100 shall be made without consent of all owners of the *Benefited Parcels*. Cost less than \$100 for normal maintenance may be performed by any *Benefited Parcel* owner, with the costs shared equally by all of the *Benefited Parcels*. A *Benefited Parcel* who fails to pay their share of costs associated with this agreement shall be subject to lien by the owners of the remaining *Benefited Parcels* 90 days after written request for payment is mailed to the non-paying *Benefited Parcel* owner(s). The request for payment shall state whether the purpose of the expenditure was for normal maintenance or a capital expenditure, the total amount of the expenditure, the date of the expenditure(s), and the pro rata share of the expenditures which apply to the parcel against which a lien may be filed. Enforcement and collection of the lien created by this agreement shall be by, and at the expense of, the benefited parcels by a court having jurisdiction, or as otherwise provide by statute. Both parcels have responsibility for driveway maintain in keeping vertical clearance above drive clear for 15 feet as required to allow for emergency vehicles. Snow plowing shall be shared equally between houses for keeping drive clear and passable.

Township Indemnification

The owners of the *Benefited Parcels*, their successors, and assigns agree to indemnify and hold harmless the Township of Tyrone for any claim, cause of action, or liability which may be created by the *Benefited Parcel* owner's maintenance, or lack thereof, of the shared private driveway easement.

Recording of Agreement

This agreement shall run with the land, shall be recorded with each *Benefited Parcel* by the Livingston County Register of Deeds, and shall be enforceable upon and by all current and future owners of the *Benefited Parcels*. The Tyrone Township Clerk and each party to this agreement shall be provided a copy of this recorded document.

Document must be signed by all *Benefited Parcel* owners and notarized.

RECEIVED

OCT 06 2021

TYRONE TOWNSHIP PLANNING COMMISSION REVIEW APPLICATION

TYRONE TOWNSHIP
PLANNING & ZONING

Property Address / Location <i>Indian View Trail</i>	Parcel ID/Zoning District <i>4704-21-100-010</i>
Property Owner(s) <i>Mark Nenni</i>	Telephone
Street Address <i>1756 Oakbrooke Drive #1</i>	Cell Phone <i>248-513-9811</i>
City <i>Howell</i>	FAX or E-Mail
State and Zip code <i>MI, 48843</i>	Telephone
Authorized Agent	Cell Phone
Street Address	Cell Phone
City	State and Zip Code

Type of Review:

- Boundary Realignment
- Concept Review
- Conditional Zoning
- Home Occupation
- Land Division
- Open Space Preservation
- Other

- Open Space Relocation
- Private Road/Shared Drive
- Planned Unit Development
- Public Hearing
- Rezoning
- Site Condominium

- Site Plan Review
- Site Visit
- Special Land Use
- Special Meeting
- Subcommittee Meeting
- Subdivision Plat

Project Description:

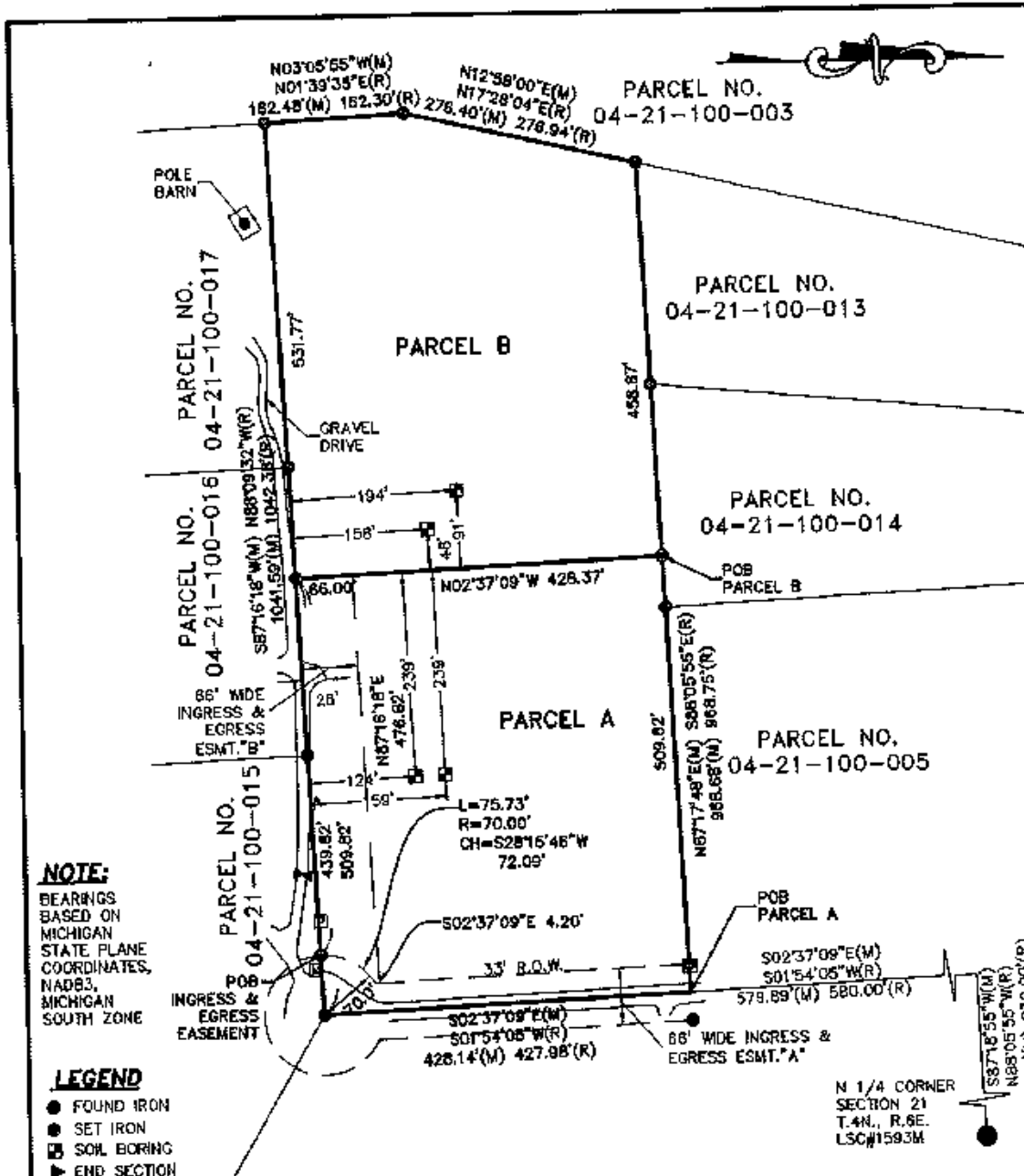
Split 10 acres into two 5 acre parcels

shared private driveway

Planning Commission applications should be filed with the Planning Commission Recording Secretary at least 14 days (21 days for land divisions/realignments) prior to review. Applications will not be scheduled for review until all information has been received. This Signature constitutes the applicant's acknowledgement of the application requirements and permission for site inspection by Tyrone Township representatives.

[Signature]
Signature of Owner(s) or Authorized Agent

Date <i>10</i>	Tax Status	Fees: 101-000000-607-006	Escrow: 701-000000-283- <u> </u>
Received By: <i>RN</i>	<i>OK per cert of public uses</i>	<i>\$1,000</i>	<i>\$2,000</i>



NOTE:
 BEARINGS BASED ON MICHIGAN STATE PLANE COORDINATES, NAD83, MICHIGAN SOUTH ZONE

LEGEND

- FOUND IRON
- SET IRON
- SOIL BORING
- ▶ END SECTION
- MAIL BOX

WITNESS:
 NORTH 1/4 CORNER-SECTION 21, T4N-R6E
 FOUND BRASS LIVINGSTON COUNTY REMONUMENTATION CAP #14762
 S70°E - 60.31' SP & TAG S/S
 15" ASH
 S50°E - 84.06' SP & TAG S/S
 U. POLE
 NORTH - 29.12' SP & TAG E/S
 10" WILLOW
 N25°E - 33.47' SP & TAG E/S
 12" POPLAR



CERTIFICATION:
 I HEREBY CERTIFY THAT I HAVE SURVEYED THE PROPERTY HEREIN DESCRIBED, AND THAT THERE ARE NO VISIBLE ENCROACHMENTS UPON THE ABOVE DESCRIBED PROPERTY, EXCEPT AS SHOWN HEREON. I CERTIFY THAT THE REQUIREMENTS FOR 1970 PA 132, MCL 54.213 HAVE BEEN MET. THE RELATIVE POSITIONAL PRECISION OF THE CORNERS IDENTIFIED FOR THIS SURVEY AND SHOWN ON THE MAP ARE WITHIN THE LIMITS ACCEPTED BY THE PRACTICE OF PROFESSIONAL SURVEYING.

John D. Heikkinen
 JOHN D. HEIKKINEN
 PROFESSIONAL SURVEYOR #47952

ALPINE ENGINEERING, INC.
 CIVIL ENGINEERS & LAND SURVEYORS
 46892 WEST ROAD SUITE 108
 NOV, MICHIGAN 48377
 (248) 926-3701 (BUS)
 (248) 926-3785 (FAX)

CLIENT:	MARK NIEMI	DATE:	5/14/2021
PARCEL SPLIT		DRAWN BY:	TTP
		CHECKED BY:	JDH
PARCEL NO. 4704-21-100-010		0 75 150	
SECTION: 21 TOWNSHIP: 4 N RANGE: 6 E		FBK:	1/2 N/A
TYRONE TOWNSHIP LIVINGSTON COUNTY MICHIGAN		CHK: MJJ	
		SCALE:	HOR 1" = 400 FT. VER 1" = 1 FT.

PARENT PARCEL (AS PROVIDED):

PART OF THE NORTHWEST 1/4 OF SECTION 21, TOWNSHIP 4 NORTH, RANGE 6 EAST, DESCRIBED AS: COMMENCING AT THE NORTH 1/4 CORNER OF SAID SECTION 21; THENCE NORTH 88 DEGREES 05 MINUTES 55 SECONDS WEST ALONG THE NORTH LINE OF SAID SECTION 21 A DISTANCE OF 930.00 FEET; THENCE SOUTH 01 DEGREES 54 MINUTES 05 SECONDS WEST 580.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING SOUTH 01 DEGREES 54 MINUTES 05 SECONDS WEST 427.98 FEET; THENCE NORTH 88 DEGREES 09 MINUTES 32 SECONDS WEST 1042.38 FEET; THENCE NORTH 01 DEGREES 39 MINUTES 36 SECONDS EAST 182.30 FEET; THENCE NORTH 17 DEGREES 28 MINUTES 04 SECONDS EAST 276.94 FEET; THENCE SOUTH 88 DEGREES 05 MINUTES 55 SECONDS EAST 968.75 FEET TO POINT OF BEGINNING.

TOGETHER WITH A NON-EXCLUSIVE EASEMENT BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: A 66 FOOT WIDE INGRESS, EGRESS, PUBLIC UTILITY AND EMERGENCY VEHICLE EASEMENT, THE CENTERLINE OF WHICH IS DESCRIBED AS: COMMENCING AT THE NORTH 1/4 CORNER OF SAID SECTION 21; THENCE NORTH 88 DEGREES 05 MINUTES 55 SECONDS WEST ALONG THE NORTH LINE OF SAID SECTION 21 A DISTANCE OF 930.00 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 01 DEGREES 54 MINUTES 05 SECONDS WEST 1007.98 FEET TO THE CENTER OF A 70 FOOT RADIUS CUL-DE-SAC.

PARENT PARCEL (AS SURVEYED):

PART OF THE NORTHWEST 1/4 OF SECTION 21, T4N, R6E, TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 21; THENCE S87°18'55"W 929.21 FEET ALONG THE NORTH LINE OF SECTION 21 AND THE CENTERLINE OF CENTER ROAD; THENCE S02°37'09"E 579.89 FEET TO THE POINT OF BEGINNING; THENCE S02°37'09"E 428.14 FEET; THENCE S87°16'18"W 1041.58 FEET; THENCE N03°05'55"W 182.48 FEET; THENCE N12°58'00"E 276.40 FEET; THENCE N87°17'48"E 968.88 FEET TO THE POINT OF BEGINNING, CONTAINING 10.03 ACRES, MORE OR LESS, SUBJECT TO AND INCLUDING THE USE OF A 66 FOOT WIDE INGRESS, EGRESS, PUBLIC UTILITIES, AND EMERGENCY VEHICLE EASEMENT, KNOWN AS EASEMENT "A".

RESULTANT PARCELS:

PARCEL A:

PART OF THE NORTHWEST 1/4 OF SECTION 21, T4N, R6E, TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 21; THENCE S87°18'55"W 929.21 FEET ALONG THE NORTH LINE OF SECTION 21 AND THE CENTERLINE OF CENTER ROAD; THENCE S02°37'09"E 579.89 FEET TO THE POINT OF BEGINNING; THENCE S02°37'09"E 428.14 FEET; THENCE S87°16'18"W 509.82 FEET; THENCE N02°37'09"W 428.37 FEET; THENCE N87°17'48"E 509.82 FEET TO THE POINT OF BEGINNING, CONTAINING 5.01 ACRES, MORE OR LESS, SUBJECT TO AND INCLUDING THE USE OF A 66 FOOT WIDE EASEMENT "A" AND ALSO BEING SUBJECT TO AND INCLUDING THE USE OF A 66 FOOT WIDE INGRESS & EGRESS EASEMENT "B".

PARCEL B:

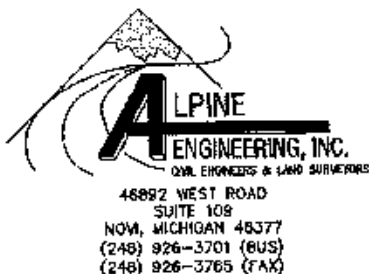
PART OF THE NORTHWEST 1/4 OF SECTION 21, T4N, R6E, TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 21; THENCE S87°18'55"W 929.21 FEET ALONG THE NORTH LINE OF SECTION 21 AND THE CENTERLINE OF CENTER ROAD; THENCE S02°37'09"E 579.89 FEET; THENCE S87°17'48"W 509.82 FEET TO THE POINT OF BEGINNING; THENCE S02°37'09"E 428.37 FEET; THENCE S87°16'18"W 531.77 FEET; THENCE N03°05'55"W 182.48 FEET; THENCE N12°58'00"E 276.40 FEET; THENCE N87°17'48"E 458.87 FEET TO THE POINT OF BEGINNING, CONTAINING 5.01 ACRES, MORE OR LESS, BEING SUBJECT TO AND INCLUDING THE USE OF A 66 FOOT WIDE EASEMENT "A".

66 FOOT INGRESS & EGRESS EASEMENT "A"

PART OF THE NORTHWEST 1/4 OF SECTION 21, T4N, R6E, TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE NORTH 1/4 CORNER S87°18'55"W 929.21 FEET TO THE POINT OF BEGINNING; THENCE S02°37'09"E 1007.98 FEET TO THE CENTER OF A 70 FOOT RADIUS CUL-DE-SAC.

66 FOOT INGRESS & EGRESS EASEMENT "B"

PART OF THE NORTHWEST 1/4 OF SECTION 21, T4N, R6E, TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE NORTH 1/4 CORNER S87°18'55"W 929.21 FEET; THENCE S02°37'09"E 1008.03; THENCE S87°16'18"W 70.00 FEET TO THE POINT OF BEGINNING; THENCE S87°16'18"W 439.82 FEET; THENCE N02°37'09"W 66.00 FEET; THENCE N87°16'18"E 476.81 FEET; THENCE S02°37'09"E 4.20 FEET; THENCE 75.73 FEET ALONG A 70.00 FOOT RADIUS CURVE TO THE LEFT, CHORD BEARING S28°15'48"W 72.09 FEET TO THE POINT OF BEGINNING.



CLIENT:		DATE:	S/14/2021
MARK NIEMI		DRAWN BY:	TTP
PARCEL SPLIT		CHECKED BY:	JOH
PARCEL NO. 4704-21-100-010		0 50 100	
SECTION: 21 TOWNSHIP: 4 N RANGE: 6 E		FBK:	2/2 N/A
TYRONE TOWNSHIP		CMF: WJJ	
LIVINGSTON COUNTY		SCALE:	HOR 1"=100 FT.
MICHIGAN		VER:	1"= FT.

RECEIVED

OCT 06 2021

TYRONE TOWNSHIP
PLANNING & ZONING

Shared Private Driveway Maintenance

Legal description of Parcel A

PARCEL A:

PART OF THE NORTHWEST 1/4 OF SECTION 21, T4N, R6E, TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 21; THENCE S87°18'55"W 929.21 FEET ALONG THE NORTH LINE OF SECTION 21 AND THE CENTERLINE OF CENTER ROAD; THENCE S02°37'09"E 579.89 FEET TO THE POINT OF BEGINNING; THENCE S02°37'09"E 428.14 FEET; THENCE S87°16'18"W 509.82 FEET; THENCE N02°37'09"W 428.37 FEET; THENCE N87°17'48"E 509.82 FEET TO THE POINT OF BEGINNING, CONTAINING 5.01 ACRES, MORE OR LESS, SUBJECT TO AND INCLUDING THE USE OF A 66 FOOT WIDE EASEMENT "A" AND ALSO BEING SUBJECT TO AND INCLUDING THE USE OF A 66 FOOT WIDE INGRESS & EGRESS EASEMENT "B".

Legal description of Parcel B

PARCEL B:

PART OF THE NORTHWEST 1/4 OF SECTION 21, T4N, R6E, TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 21; THENCE S87°18'55"W 929.21 FEET ALONG THE NORTH LINE OF SECTION 21 AND THE CENTERLINE OF CENTER ROAD; THENCE S02°37'09"E 579.89 FEET; THENCE S87°17'48"W 509.82 FEET TO THE POINT OF BEGINNING; THENCE S02°37'09"E 428.37 FEET; THENCE S87°16'18"W 531.77 FEET; THENCE N03°05'55"W 162.48 FEET; THENCE N12°58'00"E 276.40 FEET; THENCE N87°17'48"E 458.87 FEET TO THE POINT OF BEGINNING, CONTAINING 5.01 ACRES, MORE OR LESS, BEING SUBJECT TO AND INCLUDING THE USE OF A 66 FOOT WIDE EASEMENT "A".

Creation of Shared Private Driveway

The legal owners of the legally described parcels herein ("the **Benefited Parcels**") hereby grant and convey to each other a 66 foot wide ingress and egress easement for a shared private driveway, the easement being described as follows:

A nonexclusive ingress and egress 66 foot wide easement for shared private driveway purposes, further described as:

66 FOOT INGRESS & EGRESS EASEMENT "A"

PART OF THE NORTHWEST 1/4 OF SECTION 21, T4N, R6E, TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE NORTH 1/4 CORNER S87°18'55"W 929.21 FEET TO THE POINT OF BEGINNING; THENCE S02°37'09"E 1007.98 FEET TO THE CENTER OF A 70 FOOT RADIUS CUL-DE-SAC.

66 FOOT INGRESS & EGRESS EASEMENT "B"

PART OF THE NORTHWEST 1/4 OF SECTION 21, T4N, R6E, TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE NORTH 1/4 CORNER S87°18'55"W 929.21 FEET; THENCE S02°37'09"E 1008.03; THENCE S87°16'18"W 70.00 FEET TO THE POINT OF BEGINNING; THENCE S87°16'18"W 439.82 FEET; THENCE N02°37'09"W 66.00 FEET; THENCE N87°16'18"E 476.81 FEET; THENCE S02°37'09"E 4.20 FEET; THENCE 76.73 FEET ALONG A 70.00 FOOT RADIUS CURVE TO THE LEFT, CHORD BEARING S28°15'46"W 72.09 FEET TO THE POINT OF BEGINNING.

located in Tyrone Township, Livingston County, Michigan. The owners of the *Benefited Parcels* shall use the shared private driveway easement for the purposes of vehicle ingress and egress, including public and emergency vehicles, and for the placement of public utilities to benefit their parcels. Use of this easement is limited to the *Benefited Parcels*.

Maintenance

The shared private driveway easement shall be constructed and maintained in accordance with Tyrone Township standards. The cost of construction (if applicable) and maintenance shall be shared equally between both parcels where the cost of driveway construction can be added to sale price of land. The shared private driveway easement shall be maintained in a good state of repair not less than that required by Tyrone Township at the time of the creation of the shared private driveway easement. Tyrone Township and Livingston County shall not be responsible for maintenance, or the cost thereof.

No capital expenditures exceeding \$500 shall be made without consent of all owners of the *Benefited Parcels*. Cost less than \$500 for normal maintenance may be performed by any *Benefited Parcel* owner, with the costs shared equally by all of the *Benefited Parcels*. A *Benefited Parcel* who fails to pay their share of costs associated with this agreement shall be subject to lien by the owners of the remaining *Benefited Parcels* 90 days after written request for payment is mailed to the non-paying *Benefited Parcel* owner(s). The request for payment shall state whether the purpose of the expenditure was for normal maintenance or a capital expenditure, the total amount of the expenditure, the date of the expenditure(s), and the pro rata share of the expenditures which apply to the parcel against which a lien may be filed. Enforcement and collection of the lien created by this agreement shall be by, and at the expense of, the benefited parcels by a court having jurisdiction, or as otherwise provide by statute.

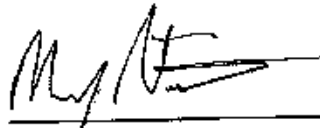
Township Indemnification

The owners of the *Benefited Parcels*, their successors, and assigns agree to indemnify and hold harmless the Township of Tyrone for any claim, cause of action, or liability which may be created by the *Benefited Parcel* owner's maintenance, or lack thereof, of the shared private driveway easement.

Recording of Agreement

This agreement shall run with the land, shall be recorded with each *Benefited Parcel* by the Livingston County Register of Deeds, and shall be enforceable upon and by all current and future owners of the *Benefited Parcels*. The Tyrone Township Clerk and each party to this agreement shall be provided a copy of this recorded document.

_____ sign above
Print name below


_____ Mark J Niemi

Document must be signed by all *Benefited Parcel* owners and notarized.

RECEIVED
OCT 06 2021
TYRONE TOWNSHIP
PLANNING & ZONING

Tyrone Township Escrow Agreement

This Escrow Agreement is for the cost of review, inspection and monitoring of the project of the Applicant. This includes, but not limited to:

- a) The cost of the review of applications for approvals and variances;
- b) Site Plan Reviews;
- c) Any Planning Commission meetings;
- d) Special meetings;
- e) Reviews by Township Attorney and preparation of appropriate approving resolutions or ordinances;
- f) Reviews by Township planner and/or engineer;
- g) Publications and notices of public hearings or meetings;
- h) Traffic studies;
- i) Environmental impact studies;
- j) Engineering Construction Reviews
- k) Zoning administrator inspections and involvement;
- l) Any other services or expenses relating to the application, inspection or monitoring processes incurred by the Township that are necessary and incident to the completion of the work or project.

Accordingly the Applicant shall pay, simultaneously with the execution of this Agreement, the sum of \$ 2,000 to be held in escrow by the Township to cover the aforementioned costs and expenses. The escrow deposits shall bear no interest.

If, during the project, the escrow balance falls below the amount necessary to complete the project, the Applicant shall make additional deposits sufficient to cover any deficit.

Any excess funds remaining in any escrow account after the project completion will be refunded to the Applicant less any administrative fees.

If the project costs and expenses exceed the amount remaining in the escrow after final project approval, the Township shall send the Applicant a statement for such additional costs. Until the Applicant pays for such costs, no further Township permits or approvals shall be issued.

TYRONE TOWNSHIP

By: _____

Its: _____

APPLICANT

RECEIVED
OCT 06 2021
TYRONE TOWNSHIP
PLANNING & ZONING

TYRONE TOWNSHIP

Receipt: 114309

10/06/21

8420 RUNYAN LAKE RD
FENTON, MI 48430
810-629-8631

Cashier: TDORSCH
Received Of: NIEMI MARK J

WWW.TYRONETOWNSHIP.US

3535 MILL ST
HARTLAND MI 48353

Payment for:
PLANNING COMMISSION

The sum of: 1,000.00

BDINV 00018143

101-000.000-628.000

1,000.00
Total

1,000.00

1,000.00

TENDERED:

CHECKS

007

1,000.00

Signed: _____

TYRONE TOWNSHIP

Receipt: 114308

10/06/21

8420 RUNYAN LAKE RD
FENTON, MI 48430
810-629-8631
WWW.TYRONE TOWNSHIP.US

Cashier: TDORSCH
Received Of: NIEMI MARK J

3535 MILL ST
HARTLAND MI 48353

Payment for:
ESCROW
4704-21-100-010

The sum of: 2,000.00

BDINV 00018144

701-000.000-283.000

2,000.00
Total

2,000.00

2,000.00

2,000.00

TENDERED:

CHECKS

006

Signed: _____

NEW BUSINESS #3

Historic Town House Resolution

**RESOLUTION #2201xx
TYRONE TOWNSHIP, LIVINGSTON COUNTY**

HISTORIC TOWN HOUSE

WHEREAS, Tyrone Township owns a structure described as the Historic Town House which is currently located at 10408 Center Rd., Fenton, Michigan, 48430;

WHEREAS, the Historic Town House is located at 10408 Center Rd., Fenton, Michigan, 48430 pursuant to an agreement with the owner of that real property permitting Tyrone Township to keep and maintain the Historic Town House at that location for a period of time and further, pursuant to that agreement, enter upon that property to remove the Historic Town House to another location;

WHEREAS, Tyrone Township wishes to state its intentions to maintain ownership and control over the Historic Town House;

NOW, THEREFORE, BE IT RESOLVED Tyrone Township shall maintain ownership of the Historic Town House and shall:

Maintain the Historic Town House;
Insure the Historic Town House;
Manage and oversee any relocation efforts of the Historic Town House.

RESOLVED BY:
SUPPORTED BY:

VOTE:

ADOPTION DATE: January 18, 2022

CERTIFICATION OF THE CLERK

The undersigned, being the duly qualified and acting Clerk of Tyrone Township, Livingston County, Michigan, hereby certifies that (1) the foregoing is a true and complete copy of a resolution adopted by the Township Board at a regular meeting, held on January 18, 2022, at which meeting a quorum was present and remained throughout, (2) the original thereof is on file in the records in my office, (3) the meeting was conducted, and public notice thereof was given, pursuant to and in full compliance with the Open Meetings Act (Act No. 267, Public Acts of Michigan, 1976, as amended) and (4) minutes of such meeting were kept and will be or have been made available as required thereby.

Marcella Husted
Township Clerk

NEW BUSINESS #4

Grant Management Policies and Procedures Resolution.

**RESOLUTION #2201xx
TYRONE TOWNSHIP, LIVINGSTON COUNTY**

**TO ESTABLISH TOWNSHIP
GRANT MANAGEMENT POLICIES AND PROCEDURES**

WHEREAS, pursuant to the accounting standards as it relates to the requirement of the Township having written federal grant management policies and procedures; and

WHEREAS, the Board of Tyrone Township deems it necessary to officially adopt the written grant management policies and procedures (attachment A) before expending federal funds;

NOW, THEREFORE, BE IT RESOLVED, that as of January 18, 2022 the Township has adopted the written grant management policies and procedures.

RESOLVED BY:
SUPPORTED BY:

VOTE:

ADOPTION DATE: January 18, 2022

CERTIFICATION OF THE CLERK

The undersigned, being the duly qualified and acting Clerk of Tyrone Township, Livingston County, Michigan, hereby certifies that (1) the foregoing is a true and complete copy of a resolution adopted by the Township Board at a regular meeting, held on January 18, 2022, at which meeting a quorum was present and remained throughout, (2) the original thereof is on file in the records in my office, (3) the meeting was conducted, and public notice thereof was given, pursuant to and in full compliance with the Open Meetings Act (Act No. 267, Public Acts of Michigan, 1976, as amended) and (4) minutes of such meeting were kept and will be or have been made available as required thereby.

Marcella Husted
Township Clerk

Tyrone Township
Policies and Procedures – Federal Awards Administration
Financial Management Systems
Grant Administration

1. Grant Development, Application, and Approval –

- a. Legislative Approval – The point at which legislative approval is required is determined by the requirements of the grant program. If the grant must be submitted by “an individual authorized by the legislative body”, then Board approval is required prior to submitting the application. If such legislative approval is not specifically required by the written terms of the grant, then the Supervisor may, at his or her discretion, approve grant applications.
- b. Matching Funds – Grants that require cash local matches must be coordinated through the Accountant. At a minimum, funds must be identified within the existing budget to provide the match, or a budget amendment will be required. Depending on the nature of the grant, there may also be some policy implications that will bear discussion.

In all cases involving matching funds, the grant applicant should contact the Accountant to determine the strategy for securing matching funds.

Refer to the section within this manual titled “Matching, Level of Effort, and Earmarking” for additional information on compliance with the provisions of the OMB Circular A-133 Compliance Supplement.

- c. Grant Budgets – Most grants require the submission of an expenditure budget. The Accountant should review this portion of the grant request prior to submission. Frequently, a technical review will discover inconsistencies in the calculations, cost centers that might have been overlooked, or identify reimbursable expenses of which Township staff may not be aware—particularly in the indirect cost area.

Grant applicants should contact the Accountant to request a technical review of a grant proposal budget.

2. Grant Program Implementation –

- a. Notification and Acceptance of an Award – Official notification of a grant award is typically sent by a funding agency to the Supervisor and/or other official designated in the original grant proposal. However, the authorization to actually spend grant funds is derived from the Board through the approval of a grant budget.

Adoption of the grant budget as a component of the Government-wide operating budget is deemed to be sufficient approval.

- b. Establishment of Accounts – The department that obtained the grant will provide the Accountant with information needed to establish revenue and expense accounts for the project. Ordinarily, this information will include a copy of a summary of the project and a copy of the full project budget.
- c. Purchasing Guidelines – All other Government purchasing guidelines apply to the expenditure of grant funds. The use of grant funds does not exempt any purchase from normal purchasing requirements. All typical paperwork and bidding requirements apply. All normal staff approvals apply. When in doubt, the Supervisor, or designee should contact the Accountant for further assistance.

3. Financial and Budgetary Compliance –

- a. Monitoring Grant Funds – Departments may use some internal mechanism (such as a spreadsheet) to monitor grant revenues, expenditures and budgetary compliance. The Accountant maintains all this information in BS&A (the Government’s accounting system) as well, and this is considered to be the Government’s “official” accounting system by the granting agencies. Supervisor, or designees are strongly encouraged to use BS&A reports provided by the Accountant for their grant tracking.

If any “off-system” accounting records are maintained, it is the responsibility of the Supervisor, or designee to ensure that the program’s internal records agree to the Government’s accounting system.

- b. Fiscal Years – Occasionally, the fiscal year for the granting agency will not coincide with the Government’s fiscal year. This may require adjustments to the Government’s internal budget accounts and interim financial reports as well as special handling during fiscal year-end close. It is the responsibility of the Accountant to bring such discrepancies to the attention of the Supervisor at the time the grant accounts are established.
- c. Grant Budgets – When the BS&A accounting structure for a grant is designed, it will include the budget that was prepared when the grant application was submitted. The terms of each specific grant will dictate whether any budget transfers between budgeted line items will be permitted. In no case will the Supervisor, or designee be authorized to exceed the total budget authority provided by the grant.

If grant funds have not been totally expended by fiscal year-end, it is the responsibility of the Supervisor, or designee to notify the Accountant that budget funds need to be carried forward to the new fiscal year, and to confirm the amounts of such carry-forwards. Carry-forwards of grant funds will be subjected to maximum allowable amounts/percentages based on the grant award agreement and/or the OMB Circular A-133 Compliance Supplement.

- d. Capital Assets – The Government is responsible for maintaining an inventory of assets purchased with grant monies. The Government is accountable for them and must make them physically available for inspection during any audit. The Accountant must be notified immediately of any

sale of these assets. Customarily, the proceeds of the sale can only be used on the grant program that purchased them. (Refer to the specific regulations governing the original grant).

The Accountant will coordinate this grant requirement. All transactions that involve the acquisition or disposal of grant funded fixed assets must be immediately brought to the attention of the Accountant. Refer to the sections of this manual titled “Capital Assets” and “Equipment and Real Property Management” for additional information.

4. Record Keeping –

- a. Audit Workpapers – The Government’s external auditors audit all grants at the end of each fiscal year. The Accountant will prepare the required audit workpapers. Supervisor, or designees may be asked to assist in this process, if necessary.
- b. Record Keeping Requirements – Grant record keeping requirements may vary substantially from one granting agency to another. Consequently, a clear understanding of these grant requirements at the beginning of the grant process is vital. The Accountant will maintain copies of all grant draw requests, and approved grant agreements (including budgets). The Supervisor, or designee should maintain all other records.

Refer to this section of this manual titled “Records Retention” for additional information.

5. Other Guidelines – Specific information on policies and procedures related to compliance with the provisions of the OMB Circular A-133 Compliance Supplement have been addressed later in this manual and should be considered along with the information in this section.

Tyrone Township
Policies and Procedures – Federal Awards Administration
OMB Circular A-133 Compliance Supplement
General Information

Source of Information – Each year the Federal government (Office of Management and Budget) issues a comprehensive document on the compliance requirements each grant recipient is obligated to follow in general terms, along with program-specific guidance on various grant awards. There are 14 compliance requirements identified, each of which is considered individually in this manual.

The following pages document the policies and procedures of the Government related to compliance with such procedures, as applicable. In each year that the Government is subject to a single audit, applicable compliance requirements are expected to be tested in detail by the Government’s independent auditors.

Objectives – The objectives of most compliance requirements are generic in nature. While the criteria for each program may vary, the main objective of the compliance requirement is relatively consistent across all programs. As such, the policies and procedures of the Government have been based on the generic sense of the compliance requirement. For selected compliance requirements, this manual addresses the specific regulations applicable to individual grants. This is not intended to imply that a program is not subject to such policies if it is not specifically mentioned here. It is the intention of the Government that all Federal awards are subject to the following policies and procedures.

Controls over Compliance – In addition to creating policies and procedures over compliance with provisions of Federal awards, the Government has implemented internal controls over such compliance, generally in the form over administrative oversight and/or independent review and approval. In order to document these control activities, all independent reviews and signed/initialed and dated.

Documentation – The Government will maintain adequate documentation to support both the compliance with applicable requirements as well as internal controls over such compliance. This documentation will be provided to the Government’s independent auditors and/or pass-through grantor agencies, as requested, during the single audit and program audits.

Tyrone Township
Policies and Procedures – Federal Awards Administration
OMB Circular A-133 Compliance Supplement
Activities Allowed/Unallowed and Allowable Costs/Cost Principles

Source of Governing Requirements – The requirements for activities allowed or unallowed are contained in program legislation, Federal awarding agency regulations, and the terms and conditions of the award.

The requirements for allowable costs/cost principles are contained in the A-102 Common Rule (§___.22), OMB Circular A-110 (2 CFR section 215.27), program legislation, Federal awarding agency regulations, and the terms and conditions of the award.

In order to ensure compliance with these requirements, Tyrone Township has implemented the following policies and procedures:

1. All grant expenditures will be in compliance with OMB Circular A-87, “*Cost Principles for State, Local, and Indian Tribal Governments*”, State law, Government policy, and the provisions of the grant award agreement will also be considered in determining allowability. Grant funds will only be used for expenditures that considered reasonable and necessary for the administration of the program.
2. Grant expenditures will be approved by Accountant initially through the purchase order process (if applicable), and again with the bill or invoice is received and entered into BS&A. This will be evidenced by approvals within the BS&A program. Accounts payable disbursements will not be processed for payment by the Clerk/Treasurer until necessary approval has been obtained.
3. Payroll costs will be documented in accordance with OMB Circular A-87 as described in the section of this manual titled “Payroll and Timekeeping”.
4. An indirect cost rate will only be charged to the grant to the extent that it was specifically approved through the grant budget/agreement.

Tyrone Township
Policies and Procedures – Federal Awards Administration
OMB Circular A-133 Compliance Supplement
Cash Management

Source of Governing Requirements – The requirements for cash management are contained in the A-102 Common Rule (§ ____.21), OMB Circular A-110 (2 CFR section 215.22), program legislation, Federal awarding agency regulations, and the terms and conditions of the award.

In order to ensure compliance with these requirements, Tyrone Township has implemented the following policies and procedures:

1. Most of the Government's grants are awarded on a reimbursement basis. As such, program costs will be expended and disbursed prior to requesting reimbursement from the grantor agency.
2. If the Government's grants are awarded on a prefunded basis the Township will follow the applicable guidelines in the grants requirement as it relates to the necessity of the separation of funds into separate back accounts (if applicable).
3. Cash draws will be initiated by Accountant who will determine the appropriate draw amount. Documentation of how this amount was determined will be retained and signed/dated.
4. Each cash draw will be reviewed by Supervisor (or designee) who will sign/initial and date the paperwork as evidence of the review.
5. The physical draw of cash will be processed in applicable Federal or State cash management system or through the means prescribed by the grant agreement for other awards.
6. Supporting documentation or a copy of the cash draw paperwork will be filed along with the approved paperwork described above and retained for audit purposes.

Tyrone Township
Policies and Procedures – Federal Awards Administration
OMB Circular A-133 Compliance Supplement
Davis-Bacon Act

Source of Governing Requirements – The requirements for Davis-Bacon are contained in 40 USC 3141-3144, 3146, and 3147; 29 CFR part 29; the A-102 Common Rule (§ __.36(i)(5)); OMB Circular A-110 (2 CFR part 215, Appendix A, Contract Provisions); program legislation; Federal awarding agency regulations; and the terms and conditions of the award.

This requirement has not historically been applicable to any of the Federal grants of Tyrone Township. Grant administrators are aware of existence of such compliance requirements and will monitor grant agreements for any change in applicability. Formal policies and procedures will be developed, as needed, to meet changes in circumstances.

Tyrone Township
Policies and Procedures – Federal Awards Administration
OMB Circular A-133 Compliance Supplement
Eligibility

Source of Governing Requirements – The requirements for eligibility are contained in program legislation, Federal awarding agency regulations, and the terms and conditions of the award.

Additional Policies and Procedures. The following policies and procedures will also be applied, to the extent that they do not conflict with or contradict the Board policies listed above:

1. Federal grants will only benefit those individuals and/or groups of participants that are deemed to be eligible.
2. Initial eligibility determinations will be made by the Accountant. Sufficient documentation to support these determinations will be retained and made available to administration, auditors, and pass-through or grantor agencies, upon request. It is the responsibility of the Accountant to maintain complete, accurate, and organized records to support eligibility determinations.

Tyrone Township
Policies and Procedures – Federal Awards Administration
OMB Circular A-133 Compliance Supplement
Equipment and Real Property Management

Source of Governing Requirements – The requirements for equipment are contained in the A-102 Common Rule (§ __ .32), OMB Circular A-110 (2 CFR section 215.34), program legislation, Federal awarding agency regulations, and the terms and conditions of the award.

Additional Policies and Procedures. The following policies and procedures will also be applied, to the extent that they do not conflict with or contradict the Board policies listed above:

In order to ensure compliance with these requirements, Tyrone Township has implemented the following policies and procedures:

1. All equipment will be used in the program for which it was acquired or, when appropriate, other Federal programs.
2. When required, purchases of equipment will be pre-approved by the grantor or pass-through agency. The Accountant will be responsible for ensuring that equipment purchases have been previously approved, if required, and will retain evidence of this approval.
3. Equipment records will be maintained, a physical inventory of equipment shall be taken, and an appropriate system shall be used to safeguard equipment, as described in the section of this manual titled “Capital Assets”.
4. When equipment with a current per unit fair market value of \$2,500 or more is no longer needed for a Federal program, it may be retained or sold with the Federal agency having a right to a proportionate amount of the current fair market value. Proper sales procedures shall be used that provide for competition to the extent practicable and result in the highest possible return.

Tyrone Township
Policies and Procedures – Federal Awards Administration
OMB Circular A-133 Compliance Supplement
Matching, Level of Effort and Earmarking

Source of Governing Requirements – The requirements for matching are contained in the A-102 Common rule (§ __.24), OMB Circular A-110 (2 CFR section 215.23), program legislation, Federal awarding agency regulations, and the terms and conditions of the award. The requirements for level of effort and earmarking are contained in program legislation, Federal awarding agency regulations, and the terms and conditions of the award.

Tyrone Township defines “matching”, “level of effort”, and “earmarking” consistent with the definitions of the OMB Circular A-133 Compliance Supplement:

Matching or cost sharing includes requirements to provide contributions (usually non-Federal) or a specified amount or percentage of match Federal awards. Matching may be in the form of allowable costs incurred or in-kind contributions (including third-party in-kind contributions).

Level of effort includes requirements for (a) a specified level of service to be provided from period to period, (b) a specified level of expenditures from non-Federal or Federal sources for specified activities to be maintained from period to period, and (c) Federal funds to supplement and not supplant non-Federal funding of services.

Earmarking includes requirements that specify the minimum and/or maximum amount of percentage of the program’s funding that must/may be used for specified activities, including funds provided to subrecipients. Earmarking may also be specified in relation to the types of participants covered.

In order to ensure compliance with these requirements, Tyrone Township has implemented the following policies and procedures:

1. Compliance with matching, level of effort, and earmarking requirements will be the responsibility of Accountant.
2. Adequate documentation will be maintained to support compliance with matching, level of effort, and earmarking requirements. Such information will be made available to administration, auditors, and pass-through or grantor agencies, as requested.

Tyrone Township
Policies and Procedures – Federal Awards Administration
OMB Circular A-133 Compliance Supplement
Period of Availability

Source of Governing Requirements – The requirements for period of availability of Federal funds are contained in the A-102 Common Rule (§ __.23), OMB Circular A-110 (2 CFR sections 215.28 and 215.71), program legislation, Federal awarding agency regulations, and the terms and conditions of the award.

In order to ensure compliance with these requirements, Tyrone Township has implemented the following policies and procedures:

1. Costs will be charged to an award only if the obligation was incurred during the funding period (unless pre-approved by the Federal awarding agency or pass-through grantor agency).
2. All obligations will be liquidated not later than 90 days after the end of the funding period (or as specified by program legislation).
3. Compliance with period of availability requirements will initially be assigned to the individual approving the allowability of the expense/payment. This will be subject to review and approval in the central office as part of the payment processing.

Tyrone Township
Policies and Procedures – Federal Awards Administration
OMB Circular A-133 Compliance Supplement
Procurement, Suspension and Debarment

Source of Governing Requirements – The requirements for procurement are contained in the A-102 Common Rule (§____.36); OMB Circular A-110 (2 CFR sections 215.40 through 215.48), program legislation, Federal awarding agency regulations, and the terms and conditions of the award.

The requirements for suspension and debarment are contained OMB guidance in 2 CFR part 180, which implements Executive Orders 12549 and 12689, Debarment and Suspension; Federal agency regulations in 2 CFR implementing the OMB guidance; the A-102 Common Rule (§____.36); OMB Circular A-110 (2 CFR section 215.13); program legislation; Federal awarding agency regulations; and the terms and conditions of the award.

In order to ensure compliance with these requirements, Tyrone Township has implemented the following policies and procedures:

1. Purchasing and procurement related to Federal grants will be subject to the general policies and procedures of the Government (described in the section of this manual titled “Purchasing and Procurement”).
2. Contract files will document the significant history of the procurement, including the rationale for the method of procurement, selection of the contract type, contractor selection or rejection, and the basis of contract price.
3. Procurement will provide for full and open competition.
4. The Government is prohibited from contracting with or making subawards under covered transactions to parties that are suspended or debarred or whose principals are suspended or debarred.

“Covered transactions” include those procurement contracts for goods and services awarded under a nonprocurement transaction (i.e., grant or cooperative agreement) that are expected to equal or exceed \$25,000 or meet certain other specified criteria. All nonprocurement transactions (i.e., subawards to subrecipients), irrespective of award amount, are considered covered transactions.

5. The Government will include a suspension/debarment clause in all written contracts in which the vendor/contractor will certify that it is not suspended or debarred. The contract will also contain language requiring the vendor/contractor to notify the Government immediately upon becoming suspended or debarred. This will serve as adequate documentation as long as the contract remains in effect.

Tyrone Township
Policies and Procedures – Federal Awards Administration
OMB Circular A-133 Compliance Supplement
Procurement, Suspension and Debarment (Concluded)

6. Each quarter, the Accountant or designee will be responsible for running a year-to-date transaction report from the Government's accounting system. Any vendor with accumulated transactions equaling or exceeding \$25,000 that is not subject to a written contract including a suspension/debarment clause or for which a signed statement or suspension or debarment is not on file will be subject to additional procedures. The Accountant or designee will check the Excluded Parties List System (EPLS) maintained by the General Services Administration (GSA) for the vendor name. A potential match will be followed-up on immediately. Each vendor searched on EPLS will be initialed on the vendor transaction report and the report will be signed and dated on the first or last page. The vendor transaction report will be retained as evidence of the control.

7. If a vendor is found to be suspended or debarred, the Government will immediately cease to do business with this vendor.

Tyrone Township
Policies and Procedures – Federal Awards Administration
OMB Circular A-133 Compliance Supplement
Program Income

Source of Governing Requirements – The requirements for program income are found in the A-102 Common Rule (§____.21 (payment) and §____.25 (program income)); OMB Circular A-110 (2 CFR section 215.2 (program income definition), 2 CFR section 215.22 (payment), and 2 CFR section 215.24 (program income)), program legislation, Federal awarding agency regulations, and the terms and conditions of the award.

In order to ensure compliance with these requirements, Tyrone Township has implemented the following policies and procedures:

1. Program income will include (but will not be limited to): income from fees for services performed, the use or rental of real or personal property acquired with grant funds, the sale of commodities or items fabricated under a grant agreement, and payments of principal and interest on loans made with grant funds. It will not include interest on grant funds unless otherwise provided in the Federal awarding agency regulations or terms and conditions of the award.
2. Tyrone Township will allow program income to be used in one of three methods:
 - a. Deducted from outlays
 - b. Added to the project budget
 - c. Used to meet matching requirements

Absent specific guidance in the Federal awarding agency regulations or the terms and conditions of the award, program income shall be deducted from program outlays.

3. Program income, when applicable, will be accounted for as a revenue source in the same program code as the Federal grant. See additional information on the uniform chart of accounts in the section of this manual titled “Chart of Accounts”.

Tyrone Township
Policies and Procedures – Federal Awards Administration
OMB Circular A-133 Compliance Supplement
Real Property Relocation and Acquisition

Source of Governing Requirements – Government-wide requirements for real property acquisition and relocation assistance are contained in Department of Transportation’s single government-wide rule at 49 CFR part 24, Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally-Assisted Programs.

This requirement has not historically been applicable to any of the Federal grants of Tyrone Township. Grant administrators are aware of existence of such compliance requirements and will monitor grant agreements for any change in applicability. Formal policies and procedures will be developed, as needed, to meet changes in circumstances.

Tyrone Township
Policies and Procedures – Federal Awards Administration
OMB Circular A-133 Compliance Supplement
Reporting

Source of Governing Requirements – Reporting requirements are contained in the following documents:

A-102 Common Rule – Financial reporting, §____.41, Performance reporting, §____.40(b), OMB Circular A-110 – Financial reporting, 2 CFR section 215, Performance reporting, 2 CFR section 215.51, program legislation, ARRA (and the previously listed OMB documents and future additional OMB guidance documents that may be issued), the Transparency Act, implementing requirements in 2 CFR part 170 and the FAR, and previously listed OMB guidance documents, Federal awarding agency regulations, and the terms and conditions of the award.

In order to ensure compliance with these requirements, Tyrone Township has implemented the following policies and procedures:

1. Reports will be submitted in the required frequency and within the required deadlines.
2. Reports will be completed using the standard forms (as applicable) and method of delivery (i.e., e-mail, grantor website, postal service, etc.).
3. Regardless of the method of report delivery, a copy of the submitted report will be retained along with any documentation necessary to support the data in the report. The report will evidence the date of submission in order to document compliance with timeliness requirements.
4. Financial reports will always be prepared based on the general ledger using the required basis of accounting (i.e., cash or accrual). In cases where financial data is tracked outside of the general accounting system (such as in spreadsheets or paper ledgers), this information will be reconciled to the general ledger prior to report submission.
5. Any report with financial-related data will either be prepared or reviewed by the Accountant.
6. Preparation of reports will be the responsibility of Accountant. All reports (whether financial, performance, or special) must be reviewed and approved by a knowledgeable administrator or Board member prior to submission. Both the preparer and reviewer will sign and date the report and retain this documentation.
7. Copies of submitted reports with preparer and reviewer signatures and data will be filed with supporting documentation and any follow-up correspondence from the grantor or pass-through agency. Copies of all such reports will be made available to administration, auditors, and pass-through or grantor agencies, as requested.

Tyrone Township
Policies and Procedures – Federal Awards Administration
OMB Circular A-133 Compliance Supplement
Subrecipient Monitoring

Source of Governing Requirements – The requirements for subrecipient monitoring are contained in 31 USC 7502(f)(2)(B) (Single Audit Act Amendments of 1996 (Pub. L. No. 104-156)), OMB Circular A-133 (§ ____.225, § ____.310(d)(5), § ____.400(d)), A-102 Common Rule (§ ____.37 and § ____.40(a)), and OMB Circular A-110 (2 CFR section 215.51(a)), program legislation, 2 CFR parts 25 and 170, and 48 CFR parts 4, 42, and 52 Federal awarding agency regulations, and the terms and conditions of the award

This requirement has not historically been applicable to any of the Federal grants of Tyrone Township. Grant administrators are aware of existence of such compliance requirements and will monitor grant agreements for any change in applicability. Formal policies and procedures will be developed, as needed, to meet changes in circumstances.

Tyrone Township
Policies and Procedures – Federal Awards Administration
OMB Circular A-133 Compliance Supplement
Special Tests and Provisions

Additional Policies and Procedures. The following policies and procedures will also be applied, to the extent that they do not conflict with or contradict the Board policies listed above:

In order to ensure compliance with these requirements, Tyrone Township has implemented the following policies and procedures:

1. The Accountant will be assigned the responsibility for identifying compliance requirements for special tests and provisions, determining approved methods for compliance, and retaining any necessary documentation.

NEW BUSINESS #5

Budget amendment.

Proposed Budget Amendments by Fund for Fiscal Year 2021/2022

Fund	Department	Account No.	Account Name	Current Budget	Current Balance as of 1/15/22	Suggested Amendment
SILVER LAKE ESTATES RUBBISH REMOVAL FUND		234-528-811.000	TRASH/RUBBISH REMOVAL	\$ 14,209.00	\$ 12,370.05	\$ 14,950.00
LAUREL SPRINGS ROAD IMPROVEMENT FUND		864-906-991.000	BOND DEBT PRINCIPAL	\$ -	\$ 5,000.00	\$ 5,000.00
GENERAL FUND	CEMETERY	101-567-810.001	LAWN MAINTENANCE	\$ 4,800.00	\$ 6,730.00	\$ 6,800.00
PUBLIC SAFETY		205-345-812.001	FIRE CONTRACTS - FIRE RUNS (FENTON TWP)	\$ 96,602.00	\$ 109,972.00	\$ 146,650.00
		205-345-812.002	FIRE CONTRACTS - FIRE RUNS (FENTON)	\$ 206,115.00	\$ 181,375.00	\$ 272,100.00
		205-345-812.003	FIRE CONTRACTS - FIRE RUNS (HARTLAND)	\$ 140,139.00	\$ 156,276.00	\$ 234,500.00

NEW BUSINESS #6

Meeting Dates 2022-2023 Resolution.

RESOLUTION #2201xx
TYRONE TOWNSHIP, LIVINGSTON COUNTY

2022-2023 MEETING DATES

WHERE AS, the State of Michigan has enacted the Open Meetings Act which requires the specific designation of the dates, times, and places of all regular meetings of the Tyrone Township Board;

WHERE AS, it is the desire of the Tyrone Township Board to conduct all of its business in an open forum in compliance with said Act;

THEREFORE, BE IT RESOLVED THAT the Tyrone Township BOARD will hold regular meetings beginning at 7:00 p.m., at the Tyrone Township Hall, 8420 Runyan Lake Road, the first and third Tuesday evenings of each month **unless changed due to conflicts with holidays or elections**. In the fiscal year, April 1, 2022 to March 31, 2023 the meetings will be held on the following dates:

April 5 & 19, 2022	October 4 & 18, 2022
May 3 & 17, 2022	November 1, 2022
June 7 & 21, 2022	December 6 & 20, 2022
July 5 & 19, 2022	January 3 & 17, 2023
August 16, 2022	February 7 & 21, 2023
September 6 & 20, 2022	March 7 & 28*, 2023

**Meeting scheduled on last Tuesday of the month for budget purposes.*

BE IT FURTHER RESOLVED THAT the Tyrone Township PLANNING COMMISSION meetings will be held on the second Tuesday evenings of each month beginning at 7:00 p.m., and workshops the third Wednesday of each month at 6:00 pm. at the Tyrone Township Hall, 8420 Runyan Lake Road, **unless changed due to conflicts with holidays or elections**. In the fiscal year, April 1, 2022 to March 31, 2023, the meetings and workshops will be held on the following dates:

April 12 & 20, 2022	October 11 & 19, 2022
May 10 & 18, 2022	November 2* & 16*, 2022
June 14 & 22, 2022	December 13 & 21, 2022
July 12 & 20, 2022	January 10 & 18, 2023
August 9 & 17, 2022	February 14 & 22, 2023
September 13 & 21, 2022	March 14 & 22, 2023

**Meetings to be held on first and third Wednesday to accommodate election schedule.*

BE IT FURTHER RESOLVED THAT the Tyrone Township ZONING BOARD OF APPEALS meetings will be held on the second Monday evening of each month **upon request** beginning at 7:00 p.m., at the Tyrone Township Hall, 8420 Runyan Lake Road, **unless changed due to conflicts with holidays or elections.** Sometimes the agenda length may determine the need for two meetings to be held during the month. In the fiscal year, April 1, 2022 to March 31, 2023, the meetings may be held on the following dates:

April 11, 2022
May 9, 2022
June 13, 2022
July 11, 2022
August 8, 2022
September 12, 2022

October 10, 2022
November 21*, 2022
December 12, 2022
January 9, 2023
February 13, 2023
March 13, 2023

**Meeting scheduled to the third Monday due to scheduled Historical Society dinner.*

RESOLVED BY:
SUPPORTED BY:

VOTE:

ADOPTION DATE: January 18, 2022

CERTIFICATION OF THE CLERK

The undersigned, being the duly qualified and acting Clerk of Tyrone Township, Livingston County, Michigan, hereby certifies that (1) the foregoing is a true and complete copy of a resolution adopted by the Township Board at a regular meeting, held on January 18, 2022, at which meeting a quorum was present and remained throughout, (2) the original thereof is on file in the records in my office, (3) the meeting was conducted, and public notice thereof was given, pursuant to and in full compliance with the Open Meetings Act (Act No. 267, Public Acts of Michigan, 1976, as amended) and (4) minutes of such meeting were kept and will be or have been made available as required thereby.

Marcella Husted
Township Clerk